

5000

Access DB# 82761

## SEARCH REQUEST FORM

### Scientific and Technical Information Center

Requester's Full Name: Kiu-Liang Peng Examiner #: 76060 Date: 12/19/02  
Art Unit: 1712 Phone Number 306-5550 Serial Number: 107000136  
Mail Box and Bldg/Room Location: CP3 GE 04 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: High Refractive index polymeric siloxysilane compo

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

*Please search the attached claims.*

\*\*\*\*\*

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher: <u>K. Fuller</u>		NA Sequence (#)	STN _____
Searcher Phone #:		AA Sequence (#)	Dialog _____
Searcher Location:		Structure (#)	Questel/Orbit _____
Date Searcher Picked Up:		Bibliographic	Dr.Link _____
Date Completed: <u>12/23/02</u>	<u>50</u>	Litigation	Lexis/Nexis _____
Searcher Prep & Review Time:		Fulltext	Sequence Systems _____
Clerical Prep Time:		Patent Family	WWW/Internet _____
Online Time: <u>60</u>		Other	Other (specify) _____

PENG 10/000136 Page 1

=> file reg  
FILE 'REGISTRY' ENTERED AT 12:59:04 ON 23 DEC 2002  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 22 DEC 2002 HIGHEST RN 477520-59-5  
DICTIONARY FILE UPDATES: 22 DEC 2002 HIGHEST RN 477520-59-5

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> file hcplus  
FILE 'HCPPLUS' ENTERED AT 12:59:09 ON 23 DEC 2002  
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FILE COVERS 1907 - 23 Dec 2002 VOL 137 ISS 26  
FILE LAST UPDATED: 22 Dec 2002 (20021222/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d que  
L1 249 SEA FILE=HCPPLUS ABB=ON SALAMONE J?/AU  
L38 SCR 2043  
L40 STR



46,273 polymers from this  
query

VAR G1=AK/CB/7  
VAR G2=AK/CB  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE  
L42        46273 SEA FILE=REGISTRY SSS FUL L40 AND L38  
L43        STR



← Subset search - covers styrol,  
acrylic, itaconic, etc

NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
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NUMBER OF NODES IS 2

STEREO ATTRIBUTES: NONE  
L46        24455 SEA FILE=REGISTRY SUB=L42 SSS FUL L43  
L47        14586 SEA FILE=HCAPLUS ABB=ON L46  
L48        725 SEA FILE=HCAPLUS ABB=ON L47 AND (LENS? OR EYE? OR OPHTHALM?)  
L49        7926 SEA FILE=HCAPLUS ABB=ON L47(L) (PREP OR IMF OR SPN)/RL  
L50        504 SEA FILE=HCAPLUS ABB=ON L48 AND L49  
L51        32 SEA FILE=HCAPLUS ABB=ON L50 AND REFRACT?  
L52        5 SEA FILE=HCAPLUS ABB=ON L1 AND L47  
L53        37 SEA FILE=HCAPLUS ABB=ON L51 OR L52  
L54        1556 SEA FILE=REGISTRY ABB=ON L46 AND 1-6/CL  
L55        19 SEA FILE=REGISTRY ABB=ON L54 AND CHLOROSILAN?  
L56        17 SEA FILE=HCAPLUS ABB=ON L55  
L57        11 SEA FILE=HCAPLUS ABB=ON L49 AND L56  
L58        0 SEA FILE=HCAPLUS ABB=ON L57 AND REFRACT?  
L59        0 SEA FILE=HCAPLUS ABB=ON L57 AND LENS?  
L60        0 SEA FILE=HCAPLUS ABB=ON L57 AND (EYE? OR OPHTHAL?)  
L61        37 SEA FILE=HCAPLUS ABB=ON L53 OR L58 OR L59 OR L60

=> d 161 bib abs hitind hitstr 1-37

L61 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
AN 2002:580394 HCAPLUS  
DN 137:270326  
TI Direct photolithographic deforming of organomodified siloxane films for  
microoptics fabrication  
AU Karkkainen, Ari H. O.; Tamkin, John M.; Rogers, Jeremy D.; Neal, Daniel

R.; Hormi, Osmo E.; Jabbour, Ghassan E.; Rantala, Juha T.; Descour, Michael R.

CS VTT Electronics, Oulu, FIN-90571, Finland

SO Applied Optics (2002), 41(19), 3988-3998

CODEN: APOPAI; ISSN: 0003-6935

PB Optical Society of America

DT Journal

LA English

AB Direct photolithog. deforming of hybrid glass films is used to fabricate optical structures. The structure is fabricated in polyethylene oxide-acrylate modified hybrid glass films with (1) binary and gray-scale photomasks using a mercury UV-lamp exposure and (2) maskless UV-laser patterning. Fabrication of isolated lenslets, lens arrays, and gratings is presented, including the assocd. exposure patterns. The hybrid glass material yields light-induced deformation peak-to-valley (p.v.) heights up to 12.8 .mu.m with mercury UV-lamp exposure and p.v. deformation heights up to 6.8 .mu.m with 365-nm UV-laser exposure. The fabricated lenslets' surface data are presented as Zernike-polynomial fit coeffs. Material synthesis and processing-related aspects are examd. to understand and control the material's deformation under exposure. The hybrid glass material exhibits a max. spectral extinction coeff. of 1.6 .times. 10<sup>-3</sup> .mu.m<sup>-1</sup> at wavelengths ranging from 450 to 2200 nm and has a refractive index of 1.52 at 632.8 nm. The fabricated structures exhibit rms surface roughness between 1 and 5 nm.

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST Section cross-reference(s): 73

photolithog deforming organomodified siloxane hybrid glass film microoptical element; lens array photolithog deforming organomodified siloxane hybrid glass film; diffraction grating photolithog deforming organomodified siloxane hybrid glass film

IT Diffraction gratings

Hybrid organic-inorganic materials

Lenses

Microlenses

Photolithography

Refractive index

Surface roughness

(fabrication of microoptical structures in polyethylene oxide-acrylate modified hybrid siloxane glass films by photolithog. deformation)

IT 66451-46-5DP, 3-(Glycidoxypropyl)trimethoxysilane-3-(methacryloxypropyl)trimethoxysilane copolymer, hydrolyzed

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(siloxane prepolymer; prepn. of polyethylene oxide-acrylate modified hybrid glass films for photolithog. fabrication of microoptical structures)

IT 66451-46-5DP, 3-(Glycidoxypropyl)trimethoxysilane-3-(methacryloxypropyl)trimethoxysilane copolymer, hydrolyzed

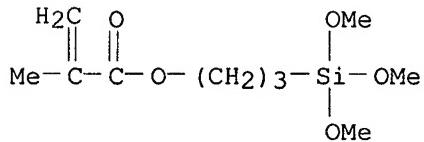
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(siloxane prepolymer; prepn. of polyethylene oxide-acrylate modified hybrid glass films for photolithog. fabrication of microoptical structures)

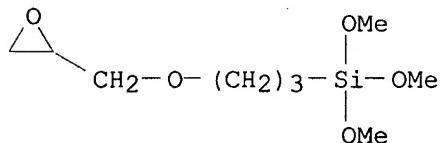
RN 66451-46-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 2530-85-0  
CMF C10 H20 O5 Si

CM 2

CRN 2530-83-8  
CMF C9 H20 O5 SiRE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 2 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 2002:553159 HCPLUS  
 DN 137:110254  
 TI Radiation-curable acrylic fluoropolymer compositions with low  
     refractive index  
 IN Takano, Kiyoshi; Yamaguchi, Hirofumi; Yamaoka, Seiji; Kinoshita, Hiroshi  
 PA Dainippon Ink and Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002206010	A2	20020726	JP 2001-191121	20010625
PRAI JP 2000-341784	A	20001109		

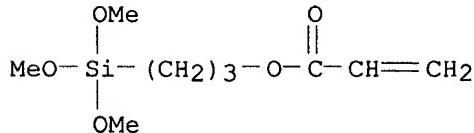
AB The compns., having refractive index of .ltoreq.1.45 and Shore D hardness of .gtoreq.80 after curing, contain  $\text{CH}_2:\text{CR}_1\text{CO}_2(\text{CH}_2)_k(\text{CF}_2)_l(\text{CH}_2)_k$   $2\text{CCR}_1:\text{CH}_2$  ( $\text{R}_1 = \text{H, Me, F, Cl}$ ;  $k = 1, 2$ ;  $l = 1-20$ ) and other monomers bearing (meth)acryloyl groups. Thus, a compn. comprising  $\text{CH}_2:\text{CHCO}_2\text{CH}_2(\text{CF}_2)_4\text{CH}_2\text{O}_2\text{CCH}:\text{CH}_2$  98.5, .gamma.-acryloxypropyltrimethoxysilane 1.0, and photoinitiator 0.5 part was cured by UV-irradn. to give a test piece showing refractive index 1.430 and Shore D hardness 88. Then, a lens comprising sequential layers of a quartz glass, a high refractive layer manuf. by curing a reaction product of 2-hydroxyethyl acrylate with 2-butyl-2-ethylpropanediol-4,4'-MDI copolymer, a low refractive layer manufd. by curing the compn., and a quartz glass showed good heat and solvent resistance.

IC ICM C08F220-24

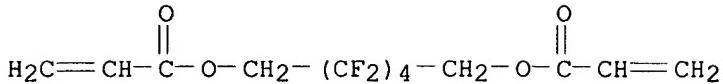
ICS G02B001-04; G02B006-00; G02B006-12  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 73  
 ST radiation curable acrylic fluoropolymer lens; heat resistance  
 acrylic fluoropolymer lens; solvent resistance acrylic  
 fluoropolymer lens  
 IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic, high refractive layers; radiation-curable  
 fluorine-contg. acrylic polymer compns. with low refractive  
 index for lenses)  
 IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic; radiation-curable fluorine-contg. acrylic polymer compns.  
 with low refractive index for lenses)  
 IT Lenses  
 (radiation-curable fluorine-contg. acrylic polymer compns. with low  
 refractive index for)  
 IT 818-61-1DP, 2-Hydroxyethyl acrylate, reaction product with polyurethane,  
 homopolymer 132827-69-1DP, 2-Butyl-2-ethyl-1,3-propanediol-4,4'-MDI  
 copolymer, reaction product with 2-hydroxyethyl acrylate, homopolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (high refractive layers; radiation-curable fluorine-contg.  
 acrylic polymer compns. with low refractive index for  
 lenses)  
 IT 140127-74-8P 443790-94-1P, .gamma.-Acryloxypropyltrimethoxysilan  
 e-2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediol diacrylate copolymer  
 443790-95-2P 443790-96-3P 443790-97-4P 443790-98-5P 443790-99-6P  
 443791-01-3P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (radiation-curable fluorine-contg. acrylic polymer compns. with low  
 refractive index for lenses)  
 IT 443790-94-1P, .gamma.-Acryloxypropyltrimethoxysilane-  
 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediol diacrylate copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (radiation-curable fluorine-contg. acrylic polymer compns. with low  
 refractive index for lenses)  
 RN 443790-94-1 HCPLUS  
 CN 2-Propenoic acid, 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl ester, polymer  
 with 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 4369-14-6  
 CMF C9 H18 O5 Si



CM 2

CRN 2264-01-9  
CMF C12 H10 F8 O4

L61 ANSWER 3 OF 37 HCPLUS COPYRIGHT 2002 ACS

AN 2002:487626 HCPLUS

DN 137:47630

TI Polymeric biomaterials containing silsesquioxane monomers

IN Bonafini, James A., Jr.; Salamone, Joseph C.

PA Bausch &amp; Lomb Incorporated, USA

SO PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DT Patent

LA English

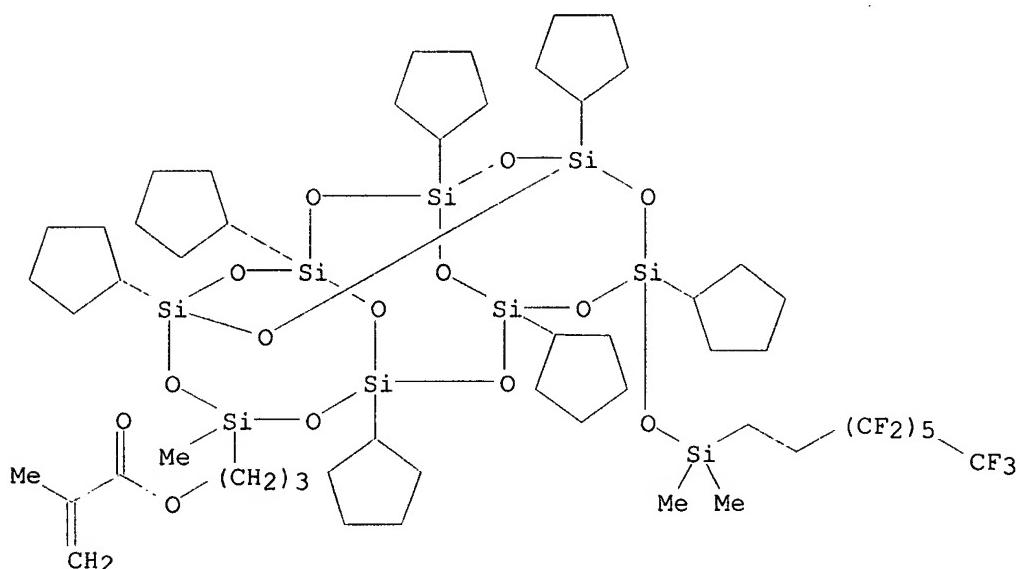
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002050144	A2	20020627	WO 2001-US46500	20011203
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002030604	A5	20020701	AU 2002-30604	20011203
	US 2002128414	A1	20020912	US 2001-23557	20011217
PRAI	US 2000-256712P	P	20001219		
	WO 2001-US46500	W	20011203		
AB	Biocompatible copolymer is produced by polymg. a mixt. comprising .gtoreq.1 monomer selected from itaconates, (meth)acrylates, fumarates and styrenics, .gtoreq.1 ethylenically unsatd. organosiloxane monomer and .gtoreq.1 monomer comprising a polyhedral oligomeric silsesquioxane (POSS) compd. Methacrylate Bu styrene POSS silylpropylmethacrylate vinylpyrrolidone acrylsiloxane copolymer.				
IC	ICM C08F230-08				
CC	35-4 (Chemistry of Synthetic High Polymers)				
IT	438586-30-2P 438586-31-3P RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (clear tough silsesquioxane-contg. copolymers with oxygen permeability for lens)				
IT	438586-30-2P 438586-31-3P RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (clear tough silsesquioxane-contg. copolymers with oxygen permeability for lens)				
RN	438586-30-2 HCPLUS				

CN 2-Propenoic acid, 2-methyl-, polymer with (1,1-dimethylethyl)ethenylbenzene, .alpha.-{dimethyl[4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl}silyl]-.omega.-[[dimethyl[4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl}silyl]oxy]poly[oxy(dimethylsilylene)], 2,2-dimethyl-1,3-propanediyl bis(2-methyl-2-propenoate), 1-ethenyl-2-pyrrolidinone, 3-[1,3,5,9,11,13,15-heptacyclopentyl-13-[(dimethyl(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silyl)oxy]-7-methyltetracyclo[9.5.1.13,9.15,15]octasiloxan-7-yl]propyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

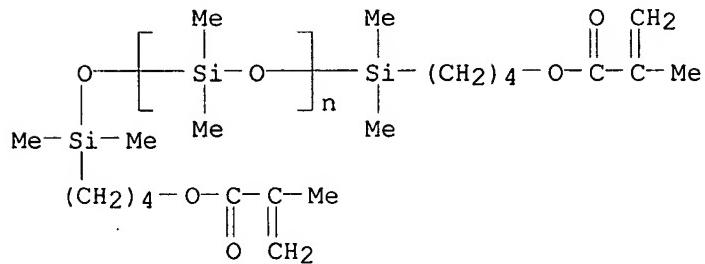
CM 1

CRN 314727-22-5  
CMF C53 H87 F13 O14 Si9



CM 2

CRN 70877-62-2  
CMF (C2 H6 O Si)n C20 H38 O5 Si2  
CCI PMS



CM 3

CRN 25338-51-6  
CMF C12 H16  
CCI IDS

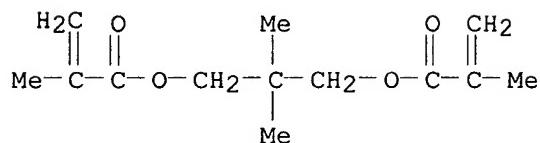


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D1—Bu-t

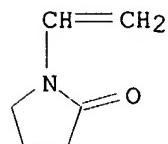
CM 4

CRN 1985-51-9  
CMF C13 H20 O4



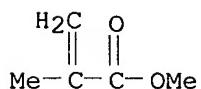
CM 5

CRN 88-12-0  
CMF C6 H9 N O



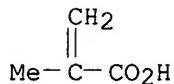
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CRN 80-62-6  
CMF C5 H8 O2



CM 7

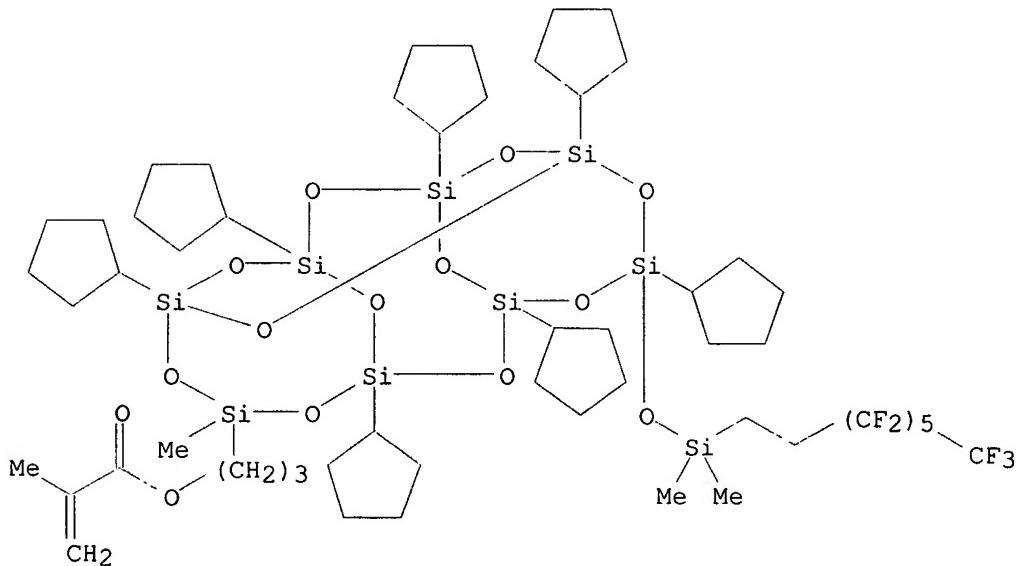
CRN 79-41-4  
CMF C4 H6 O2



RN 438586-31-3 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with (1,1-dimethylethyl)ethenylbenzene, .alpha.-[dimethyl[4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl]silyl]-.omega.-[(dimethyl[4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl]silyl)oxy]poly[oxy(dimethylsilylene)], 2,2-dimethyl-1,3-propanediyl bis(2-methyl-2-propenoate), 1-ethenyl-2-pyrrolidinone, 3-[1,3,5,9,11,13,15-heptacyclopentyl-13-[(dimethyl(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silyl)oxy]-7-methyltetracyclo[9.5.1.13,9.15,15]octasiloxan-7-yl]propyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

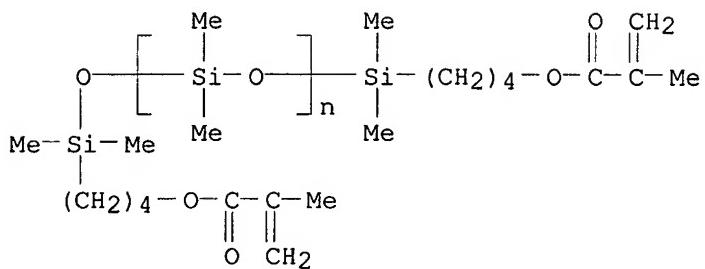
CM 1

CRN 314727-22-5  
CMF C53 H87 F13 O14 Si9



CM 2

CRN 70877-62-2  
CMF (C2 H6 O Si)n C20 H38 O5 Si2  
CCI PMS



CM 3

CRN 25338-51-6  
CMF C12 H16  
CCI IDS

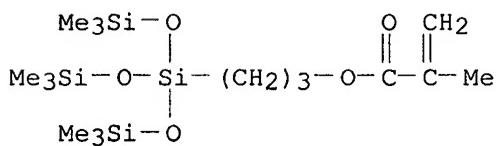


D1-CH=CH<sub>2</sub>

D1-Bu-t

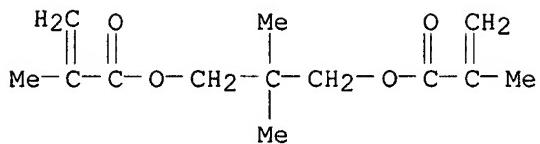
CM 4

CRN 17096-07-0  
CMF C16 H38 O5 Si4



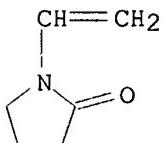
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CRN 1985-51-9  
CMF C13 H20 O4



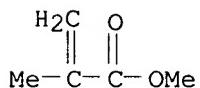
CM 6

CRN 88-12-0  
CMF C6 H9 N O



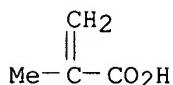
CM 7

CRN 80-62-6  
CMF C5 H8 O2



CM 8

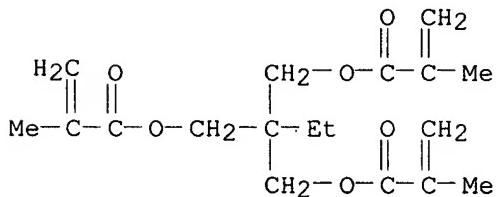
CRN 79-41-4  
CMF C4 H6 O2



L61 ANSWER 4 OF 37 HCPLUS COPYRIGHT 2002 ACS  
AN 2002:307198 HCPLUS  
DN 137:116871  
TI Siloxane-based hybrid glass materials for binary and gray-scale mask  
photoimaging  
AU Karkkainen, Ari H. O.; Rantala, Juha T.; Maaninen, Arto; Jabbour, Ghassan  
E.; Descour, Michael R.  
CS VTT Electronics, Oulu, FIN-90570, Finland  
SO Advanced Materials (Weinheim, Germany) (2002), 14(7), 535-540  
CODEN: ADVMEW; ISSN: 0935-9648  
PB Wiley-VCH Verlag GmbH  
DT Journal  
LA English

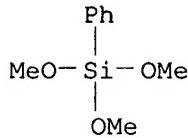
- AB The fabrication of microoptical and optomech. structures by applying photoimaging of hybrid glass materials is discussed. The optical and optomech. structures are fabricated simultaneously in a single lithog. step. Gray-scale and binary photomasks have been successfully applied for the fabrication of lens arrays to a max. lens sag of 102 .mu.m and of optomech. structures to a max. height of 140 .mu.m. Alignment-aiding optomech. structures can be patterned simultaneously with optical structures in the hybrid glass to fabricate microoptical elements. No chem. or dry etch transfer of the imaged structures is required. The fabricated lenslets and the optomech. structures show high surface and optical quality. The fabricated hybrid glass surfaces can be coated with interference coatings utilizing std. deposition procedures. Photoimaging of hybrid glass materials simplifies the fabrication of the optical components and enables new optics integration options.
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 73
- IT Microlenses  
(refractive; photoimaging of siloxane-based neg-tone hybrid glass materials in fabrication of microoptical and optomech. structures)
- IT 442874-00-2P, Phenyltrimethoxysilane-[3-(Methacryloyloxy)propyl]trimethoxysilane-trimethylolpropane trimethacrylate copolymer  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(crosslinked; photoimaging of siloxane-based neg-tone hybrid glass materials in fabrication of microoptical and optomech. structures)
- IT 442874-00-2P, Phenyltrimethoxysilane-[3-(Methacryloyloxy)propyl]trimethoxysilane-trimethylolpropane trimethacrylate copolymer  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(crosslinked; photoimaging of siloxane-based neg-tone hybrid glass materials in fabrication of microoptical and optomech. structures)
- RN 442874-00-2 HCPLUS
- CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with trimethoxyphenylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 3290-92-4  
CMF C18 H26 O6

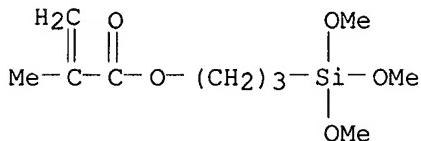
CM 2

CRN 2996-92-1  
 CMF C9 H14 O3 Si



CM 3

CRN 2530-85-0  
 CMF C10 H20 O5 Si



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 5 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 2002:240867 HCPLUS  
 DN 136:284491  
 TI Polymeric coating for contact lenses  
 IN McGee, Joseph A.; Valint, Paul L., Jr.; Bonafini, James A., Jr.;  
Salamone, Joseph C.  
 PA Bausch & Lomb Incorporated, USA  
 SO PCT Int. Appl., 70 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002024793	A1	20020328	WO 2001-US23028	20010720
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2001082933	A5	20020402	AU 2001-82933	20010720
PRAI	US 2000-665355	A	20000919		
	WO 2001-US23028	W	20010720		
AB	The present invention is directed toward the renewable surface treatment of medical devices such as contact lenses and medical implants. In particular, the present invention is directed to a method of modifying the surface of a medical device to increase its biocompatibility or				

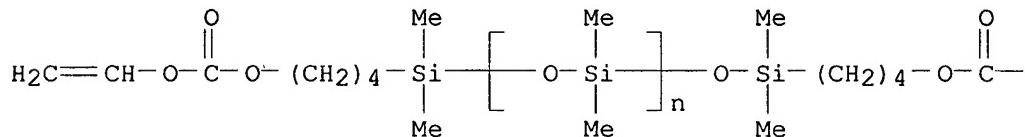
hydrophilicity by coating the device with a removable hydrophilic polymer by means of reaction between reactive functionalities on the hydrophilic polymer which functionalities are complementary to reactive functionalities on or near the surface of the medical device at reaction temps. of <55.degree.. Thus, a formulation for a silicone hydrogel lens material was prep'd. from tris(trimethylsiloxy)silylpropyl vinylcarbamate 55, N-vinyl-2-pyrrolidinone 30, a silicone-contg. vinyl carbonate 15, N-vinyloxycarbonylalanine 1, n-nonanol 15, Darocur 0.2, and 1,4-bis[4-(2-methacryloyloxyethyl)phenylamino]anthraquinone 0.05 parts by wt.

IC ICM C08J007-04  
 ICS A61L027-34; G02B001-04  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 37, 42  
 IT 158483-22-8, Balafilcon A  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
     (polymeric coating for contact lenses)  
 IT 158483-22-8, Balafilcon A  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
     (polymeric coating for contact lenses)  
 RN 158483-22-8 HCPLUS  
 CN .beta.-Alanine, N-[{ethenyloxy}carbonyl]-, polymer with  
     .alpha.-[[4-{[(ethenyloxy)carbonyl]oxy}butyl]dimethylsilyl]-.omega.-[[[4-  
         {[(ethenyloxy)carbonyl]oxy}butyl]dimethylsilyl]oxy]poly[oxy(dimethylsilyl-  
         ne)], 1-ethenyl-2-pyrrolidinone and ethenyl [3-{3,3,3-trimethyl-1,1-  
         bis[(trimethylsilyl)oxy]disiloxanyl}propyl]carbamate (9CI) (CA INDEX  
         NAME)

CM 1

CRN 158483-21-7  
 CMF (C<sub>2</sub> H<sub>6</sub> O Si)<sub>n</sub> Cl<sub>8</sub> H<sub>34</sub> O<sub>7</sub> Si<sub>2</sub>  
 CCI PMS

PAGE 1-A

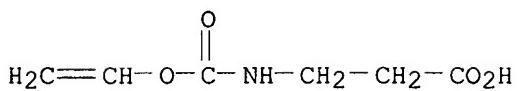


PAGE 1-B

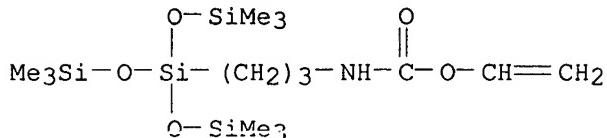
—O—CH=CH<sub>2</sub>

CM 2

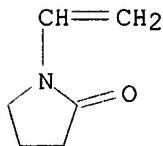
CRN 148969-96-4  
 CMF C<sub>6</sub> H<sub>9</sub> N O<sub>4</sub>



CM 3

CRN 134072-99-4  
CMF C15 H37 N O5 Si4

CM 4

CRN 88-12-0  
CMF C6 H9 N ORE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 2002:84156 HCAPLUS  
 DN 136:136363  
 TI Optical components with hard coating films and their manufacture  
 IN Ito, Takanobu  
 PA Hoya Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 2002030250	A2	20020131	JP 2000-215907	20000717
OS MARPAT 136:136363				

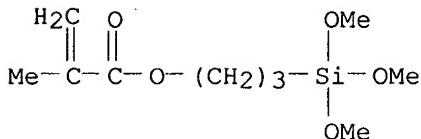
AB Title components are prep'd. from coatings contg. colloidal metal oxide particles, org. Si compds., and Rp-substituted phenols (R = C1-20 alkyl; n = 0-2 as adhesion promoters. A compn. contg. 3-glycidoxypropyltrimethoxysilane, MeOH sol of ZrO<sub>2</sub>/W<sub>0</sub><sub>3</sub>/SiO<sub>2</sub>/SnO<sub>2</sub> composite [with refractive index RI of 1.76], HCl, 2-methyl-5-isopropylphenol, and an Al chelate was directly coated on a plastic plate with RI 1.60 and cured at 120.degree. for 1 h to form a film with good adhesion initially and under moisture condition.

IC ICM C09D183-04

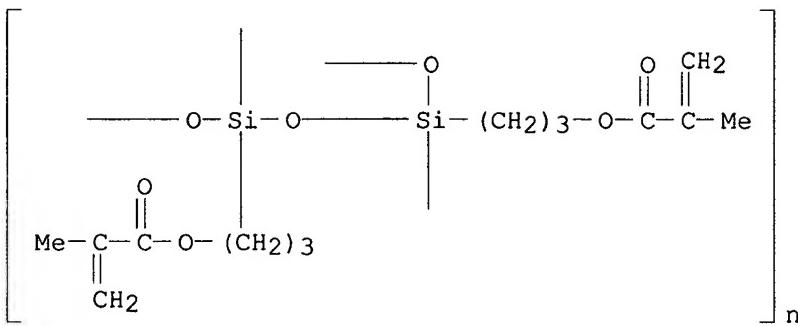
ICS C08J007-06; C09D183-14; G02B001-10; C08L101-00  
 CC 42-10 (Coatings, Inks, and Related Products)  
 IT Lenses  
     (alkylphenol- and colloidal metal oxide-contg. siloxane coatings with  
     good adhesion to optical plastics)  
 IT Plastics, miscellaneous  
     RL: MSC (Miscellaneous)  
     (lens; alkylphenol- and colloidal metal oxide-contg. siloxane  
     coatings with good adhesion to optical plastics)  
 IT 52004-97-4P, 3-Methacryloxypropyltrimethoxysilane homopolymer  
 56325-93-0P, 3-Glycidoxypolypropyltrimethoxysilane homopolymer  
 159338-14-4P, 3-Methacryloxypropyltrimethoxysilane homopolymer,  
 sru 162477-44-3P, 3-Glycidoxypolypropyltrimethoxysilane homopolymer, ladder,  
 sru  
     RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
     TEM (Technical or engineered material use); PREP (Preparation);  
     USES (Uses)  
     (alkylphenol- and colloidal metal oxide-contg. siloxane coatings with  
     good adhesion to optical plastics)  
 IT 52004-97-4P, 3-Methacryloxypropyltrimethoxysilane homopolymer  
 159338-14-4P, 3-Methacryloxypropyltrimethoxysilane homopolymer,  
 sru  
     RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
     TEM (Technical or engineered material use); PREP (Preparation);  
     USES (Uses)  
     (alkylphenol- and colloidal metal oxide-contg. siloxane coatings with  
     good adhesion to optical plastics)  
 RN 52004-97-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, homopolymer  
 (9CI) (CA INDEX NAME)

CM 1

CRN 2530-85-0  
 CMF C10 H20 O5 Si



RN 159338-14-4 HCAPLUS  
 CN Poly[[1,3-bis[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



L61 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 2001:100928 HCAPLUS  
 DN 134:168387  
 TI Biomedical compositions preparation of intraocular lenses  
 IN Clayton, Anthony Brian; Meijis, Gordon Francis  
 PA Commonwealth Scientific and Industrial Research Organisation, Australia  
 SO PCT Int. Appl., 20 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI WO 2001008603	A1	20010208	WO 2000-AU915	20000802	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
EP 1207816	A1	20020529	EP 2000-947678	20000802	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL					
PRAI AU 1999-1978	A	19990802			
	WO 2000-AU915	W	20000802		
AB	A method of prep. intraocular lenses in situ is disclosed. The method involves the injection of an unsatd. alkyldimethylsiloxane macromonomer. The macromonomer is then polymd. to give a polymer having an E modulus in the range 0.5-5 kPa. An acrylamidoorganosilicon macromer was prep'd. by the reaction of aminopropylmethyldisiloxane-dimethylsiloxane copolymer with 2-vinyl-4,4-dimethylazlactone. A soln. contg. acrylamide-functional siloxane 100, and Irgacure 651 photoinitiator 0.3 parts in chloroform was prep'd. and placed into polypropylene mold and polymd. for ten min under UV lamp. A transparent, rubbery polymer disk was obtained with shear modulus of 220 kPa.				
IC	ICM A61F002-14 ICS A61F002-16; C08G077-38; C08G077-388				
CC	63-7 (Pharmaceuticals)				
ST	biomedical intraocular lens polysiloxane polyacrylate				
IT	Polysiloxanes, biological studies				
	RL: DEV (Device component use); SPN (Synthetic preparation); THU				

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(acrylic; biomedical compns. prepn. of intraocular lenses)

IT Intraocular lenses  
Refractive index  
Young's modulus  
(biomedical compns. prepn. of intraocular lenses)

IT 324745-04-2P 324745-05-3P 324745-06-4P  
324745-07-5P  
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(biomedical compns. prepn. of intraocular lenses)

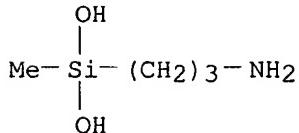
IT 324745-04-2P 324745-05-3P 324745-06-4P  
324745-07-5P  
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(biomedical compns. prepn. of intraocular lenses)

RN 324745-04-2 HCAPLUS

CN 5(4H)-Oxazolone, 2-ethenyl-4,4-dimethyl-, polymer with (3-aminopropyl)methylsilanediol and dimethylsilanediol, graft (9CI) (CA INDEX NAME)

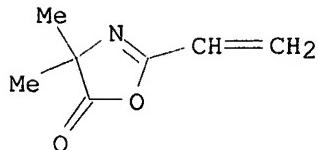
CM 1

CRN 158465-65-7  
CMF C4 H13 N O2 Si



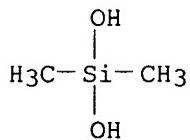
CM 2

CRN 29513-26-6  
CMF C7 H9 N O2



CM 3

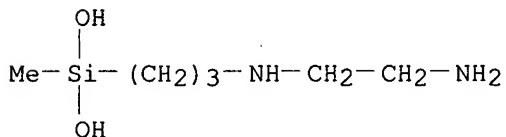
CRN 1066-42-8  
CMF C2 H8 O2 Si



RN 324745-05-3 HCAPLUS  
CN 5(4H)-Oxazolone, 2-ethenyl-4,4-dimethyl-, polymer with  
[3-[(2-aminoethyl)amino]propyl]methyldimethylsilanediol and dimethylsilanediol,  
graft (9CI) (CA INDEX NAME)

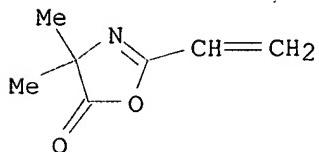
CM 1

CRN 83145-66-8  
CMF C6 H18 N2 O2 Si



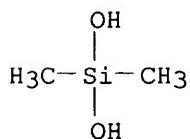
CM 2

CRN 29513-26-6  
CMF C7 H9 N O2



CM 3

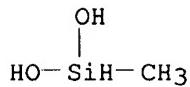
CRN 1066-42-8  
CMF C2 H8 O2 Si



RN 324745-06-4 HCAPLUS  
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with dimethylsilanediol  
and methyldimethylsilanediol, graft (9CI) (CA INDEX NAME)

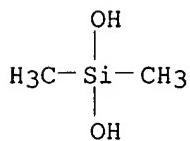
CM 1

CRN 43641-90-3  
CMF C H6 O2 Si



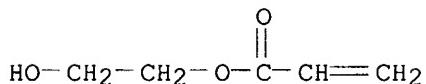
CM 2

CRN 1066-42-8  
CMF C2 H8 O2 Si



CM 3.

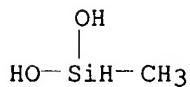
CRN 818-61-1  
CMF C5 H8 O3



RN 324745-07-5 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with  
dimethylsilanediol and methylsilanediol, graft (9CI) (CA INDEX NAME)

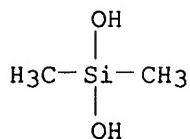
CM 1

CRN 43641-90-3  
CMF C H6 O2 Si

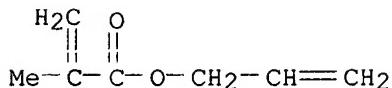


CM 2

CRN 1066-42-8  
CMF C2 H8 O2 Si



CM 3

CRN 96-05-9  
CMF C7 H10 O2RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 8 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1999:716211 HCPLUS  
 DN 131:323948  
 TI Titania-containing organic silicon polymer compositions for hard coatings on plastic lenses and their laminates with antireflection films  
 IN Miyashita, Kazunori; Takeshita, Katsuyoshi  
 PA Seiko Epson Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11310755	A2	19991109	JP 1998-117318	19980427
AB	The compns. contain (A) org. Si compds. R1SiX13 (R1 = C.gtoreq.3 org. groups with polymerizable reactive group; X1 = hydrolyzable group), (B) inorg. oxide fine particles contg. rutile TiO2 with particle diam. 1-200 .mu.m, and optionally (C) org. Si compds. X23-mR2mSiYSiR3mX33-m (R2, R3 = C1-6 hydrocarbon; X2, X3 = hydrolyzable group; Y = org. group contg. carbonate or epoxy; m = 0, 1), (D) polyepoxides, and (E) org. Si compds. R4nSiX44-n (R4 = C1-3 hydrocarbon; X4 = hydrolyzable group; n = 0, 1). The laminates comprise (colored) coating of the compn. and inorg. antireflection films. The hard coatings have excellent weather (light) resistance while keeping high refractive index. Thus, 74.93 g (.gamma.-glycidoxypyl)trimethoxysilane was allowed to react with 37.61 g vinyltrimethoxysilane in the presence of 0.1 N HCl soln., mixed with water 275.11, rutile TiO2-ZrO2-SiO2-SnO2 composite sol [Optolake 1120Z (11RU-7/A8)] 584.39, and silicone-type surfactant (L 7604) 0.30 g in this order, and stirred to give a hard coat liq., which was spin-coated onto both faces of a plastic lense, cured at 135.degree. resp., plasma-treated, and vapor-deposited with SiO2-ZrO to give laminates having excellent abrasion resistance, weather resistance, and layer adhesion.				
IC	ICM C09D183-04 ICS B32B009-00; C09D001-00; C09D163-00; G02B001-10				
CC	42-10 (Coatings, Inks, and Related Products) Section cross-reference(s): 38				

ST titania polysiloxane hard coating plastic **lense**; glycidoxypropyl methoxysilane polymn hydrolysis hard coating; abrasion resistance coating titania polysiloxane **lense**; weather resistance coating titania polysiloxane **lense**; silica zirconia antireflection coating laminate **lense**; **eyeglass lense** hard coat organopolysiloxane titania

IT Coating materials  
(abrasion- and weather-resistant; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Polysiloxanes, uses  
Polysiloxanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-epoxy; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Epoxy resins, uses  
Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polysiloxane-; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Epoxy resins, uses  
Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-contg. polysiloxane-; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Polysiloxanes, uses  
Polysiloxanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-contg.; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Antireflective films  
**Eyeglass lenses**  
(titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT 170016-51-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**lenses**; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT 1314-23-4, Zirconia, uses 7631-86-9, Silica, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(silica-zirconia antireflection film; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT 164065-58-1P, (.gamma.-Glycidoxypropyl)trimethoxysilane-vinyltrimethoxysilane copolymer 249505-84-8P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP

(Preparation); USES (Uses)

(titania-contg. organopolysiloxane compns. for hard coatings on plastic lenses and their laminates with antireflection films)

IT 249514-63-4, Optolake 1120Z11RU7A8

RL: TEM (Technical or engineered material use); USES (Uses)

(titania-contg. organopolysiloxane compns. for hard coatings on plastic lenses and their laminates with antireflection films)

IT 164065-58-1P, (.gamma.-Glycidoxypipropyl)trimethoxysilane-vinyltrimethoxysilane copolymer 249505-84-8P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(titania-contg. organopolysiloxane compns. for hard coatings on plastic lenses and their laminates with antireflection films)

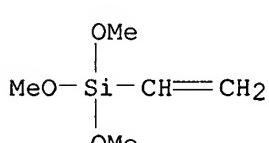
RN 164065-58-1 HCAPLUS

CN Silane, ethenyltrimethoxy-, polymer with trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 2768-02-7

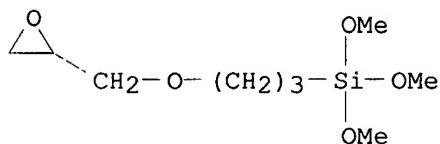
CMF C5 H12 O3 Si



CM 2

CRN 2530-83-8

CMF C9 H20 O5 Si



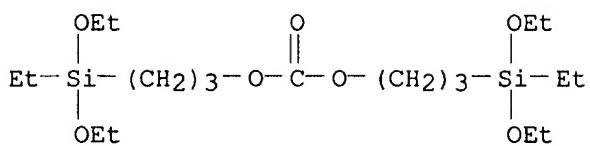
RN 249505-84-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with bis[3-(diethoxyethylsilyl)propyl] carbonate, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, ethenyltrimethoxysilane, 2,2'-[1,6-hexanediylbis(oxymethylene)]bis[oxirane] and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

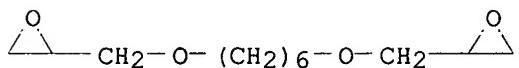
CRN 225663-58-1

CMF C19 H42 O7 Si2



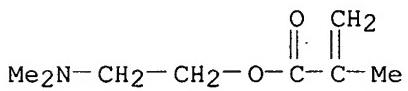
CM 2

CRN 16096-31-4  
CMF C12 H22 O4



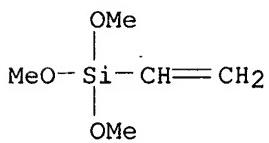
CM 3

CRN 2867-47-2  
CMF C8 H15 N O2



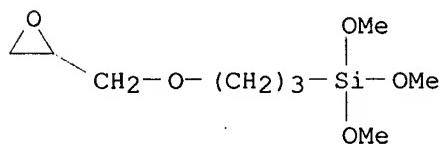
CM 4

CRN 2768-02-7  
CMF C5 H12 O3 Si

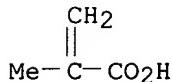


CM 5

CRN 2530-83-8  
CMF C9 H20 O5 Si



CM 6

CRN 79-41-4  
CMF C4 H6 O2

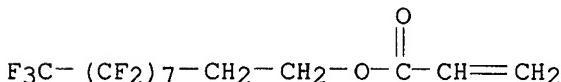
L61 ANSWER 9 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1999:490166 HCPLUS  
 DN 131:163204  
 TI Antireflective transparent materials  
 IN Oka, Koichiro; Kurasaki, Shoichi; Nakakimura, Akitoshi; Kondo, Satoshi  
 PA Toray Industries, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11211901	A2	19990806	JP 1998-13004	19980126
OS	MARPAT 131:163204				
AB	The materials comprises a substrate having (a) an elec. conductive hard coat film which may contain sol particles contg. Sn, In, or Sb and (b) a film having low <b>refractive</b> index which may contain cured product of a fluoropolymer acrylate or a glycidyl-terminated fluoropolymer. The material shows good antistatic property and high scratch resistance and is useful for a CRT, a liq. crystal display device, a window glass, an optical lens, etc.				
IC	ICM G02B001-11 ICS C08F020-22; C08G059-30; C09D005-00; C09D005-24; C09D133-16; C09D163-00; C09D201-00; G02B001-10; G09F009-00; H01J029-88; H01J029-89; B32B007-02				
CC	73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties) Section cross-reference(s): 38, 74				
IT	Polysiloxanes, properties Polysiloxanes, properties RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses) (acrylic, fluorine-contg., low <b>refractive</b> index film; antireflective transparent materials having good antistatic property and scratch resistance)				
IT	Fluoropolymers, properties RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses) (acrylic, low <b>refractive</b> index film; antireflective transparent materials having good antistatic property and scratch resistance)				
IT	Fluoropolymers, properties RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses) (acrylic-polysiloxane-, low <b>refractive</b> index film; antireflective transparent materials having good antistatic property				

and scratch resistance)  
IT Cathode ray tubes  
    Lenses  
    Liquid crystal displays  
    Windows  
        (antireflective transparent materials having good antistatic property  
        and scratch resistance)  
IT Fluoropolymers, properties  
    Fluoropolymers, properties  
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP  
(Properties); PREP (Preparation); USES (Uses)  
    (epoxy, low **refractive** index film; antireflective transparent  
    materials having good antistatic property and scratch resistance)  
IT Epoxy resins, properties  
    Epoxy resins, properties  
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP  
(Properties); PREP (Preparation); USES (Uses)  
    (fluorine-contg., low **refractive** index film; antireflective  
    transparent materials having good antistatic property and scratch  
    resistance)  
IT 190908-99-7P 236755-08-1P 236755-09-2P 236755-10-5P 236755-11-6P  
236755-12-7P 236755-13-8P  
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP  
(Properties); PREP (Preparation); USES (Uses)  
    (low **refractive** index film; antireflective transparent  
    materials having good antistatic property and scratch resistance)  
IT 236755-13-8P  
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP  
(Properties); PREP (Preparation); USES (Uses)  
    (low **refractive** index film; antireflective transparent  
    materials having good antistatic property and scratch resistance)  
RN 236755-13-8 HCPLUS  
CN 2-Propenoic acid, 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl ester, polymer  
with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl  
2-propenoate and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX  
NAME)

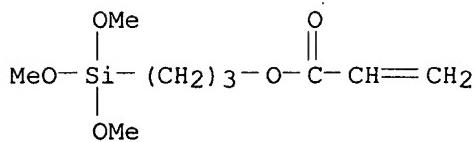
CM 1

CRN 27905-45-9  
CMF C13 H7 F17 O2

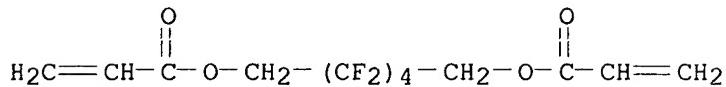


CM 2

CRN 4369-14-6  
CMF C9 H18 O5 Si



CM 3

CRN 2264-01-9  
CMF C12 H10 F8 O4

L61 ANSWER 10 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1999:322502 HCPLUS  
 DN 131:25606  
 TI Transparent resin materials with good antifouling property and surface wettability for lenses  
 IN Hiratani, Haruyuki; Kawakuchi, Toru  
 PA Menicon Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11133201	A2	19990521	JP 1997-297269	19971029
AB	The materials comprise polymers prep'd. from itaconic acid derivs. H2C:C(CO2R1)CH2CO2R2R3 [R1 = H, SiMe3; R2 = C1-5 alkylene; R3 = SiMen(OSiMe3)-n]. Thus, a specimen comprising 10:46:54:6:1 (%) .beta.-trimethylsilylpropyl itaconate-tris(trimethylsiloxy)silylstyrene-2,2,2,2',2'',2''-hexafluoroisopropyl methacrylate-4-vinylbenzyl methacrylate-ethylene glycol dimethacrylate copolymer showed O permeability (DK0.2) 128 mLcm <sup>2</sup> /mLsmmHg, contact angle 128.degree., and n 73.				
IC	ICM G02B001-04 ICS A61L027-00; C08F030-08; C09K003-00; G02C007-04; C08F290-06				
CC	73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties) Section cross-reference(s): 38				
ST	transparent itaconic acid deriv resin lens; methylsilylpropyl itaconate transparent impact resistant resin; methacrylic antifouling resin oxygen permeable lens				
IT	Transparent materials Transparent materials (impact-resistant; transparent resin materials with good antifouling property and surface wettability for lenses)				
IT	Contact angle Contact lenses Hydrogels				

**Lenses**

**Refractive index**

(transparent resin materials with good antifouling property and surface wettability for lenses)

IT Impact-resistant materials

Impact-resistant materials

(transparent; transparent resin materials with good antifouling property and surface wettability for lenses)

IT 226234-52-2P 226234-54-4P 226234-57-7P

226234-59-9P 226234-61-3P 226234-63-5P

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(transparent resin materials with good antifouling property and surface wettability for lenses)

IT 226234-52-2P 226234-54-4P 226234-57-7P

226234-61-3P 226234-63-5P

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(transparent resin materials with good antifouling property and surface wettability for lenses)

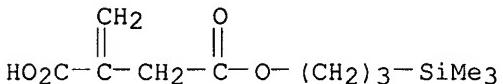
RN 226234-52-2 HCPLUS

CN Butanedioic acid, methylene-, 4-[3-(trimethylsilyl)propyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(4-ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 226234-51-1

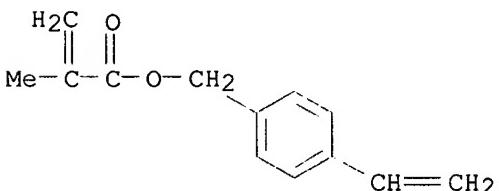
CMF C11 H20 O4 Si



CM 2

CRN 99413-45-3

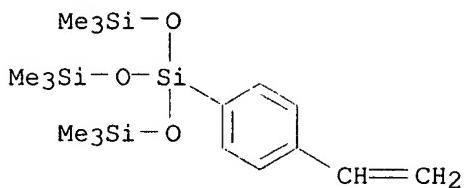
CMF C13 H14 O2



CM 3

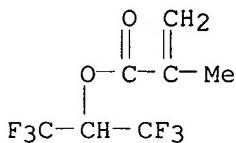
CRN 18547-54-1

CMF C17 H34 O3 Si4



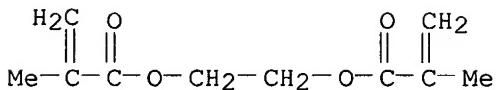
CM 4

CRN 3063-94-3  
CMF C7 H6 F6 O2



CM 5

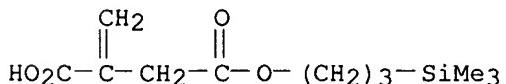
CRN 97-90-5  
CMF C10 H14 O4



RN 226234-54-4 HCPLUS  
CN Butanedioic acid, methylene-, 4-[3-(trimethylsilyl)propyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(4-ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

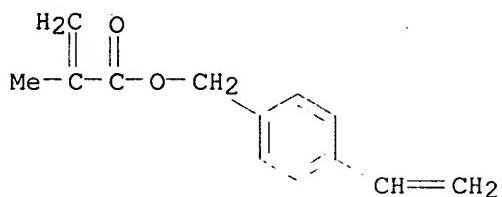
CM 1

CRN 226234-51-1  
CMF C11 H20 O4 Si



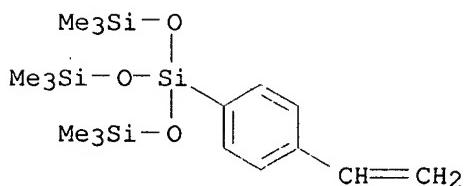
CM 2

CRN 99413-45-3  
CMF C13 H14 O2



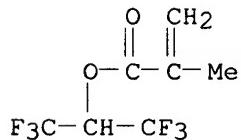
CM 3

CRN 18547-54-1  
CMF C17 H34 O3 Si4



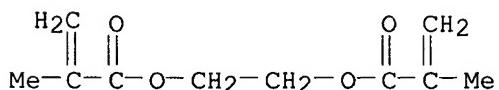
CM 4

CRN 3063-94-3  
CMF C7 H6 F6 O2



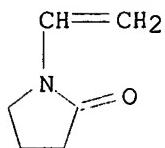
CM 5

CRN 97-90-5  
CMF C10 H14 O4



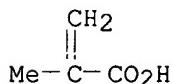
CM 6

CRN 88-12-0  
CMF C6 H9 N O



CM 7

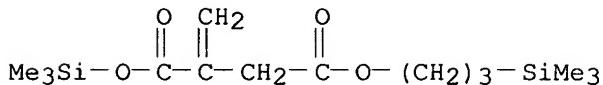
CRN 79-41-4  
CMF C4 H6 O2



RN 226234-57-7 HCPLUS  
CN Butanedioic acid, methylene-, 1-(trimethylsilyl) 4-[3-(trimethylsilyl)propyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(4-ethenylphenyl)-1,1,1,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

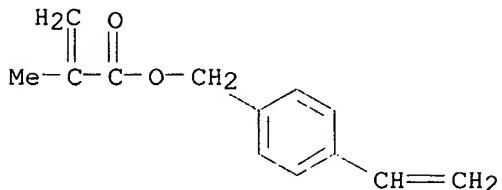
CM 1

CRN 226234-56-6  
CMF C14 H28 O4 Si2



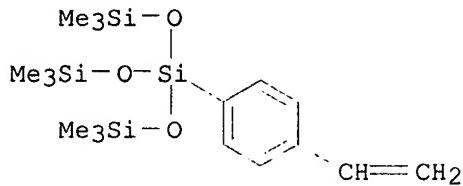
CM 2

CRN 99413-45-3  
CMF C13 H14 O2



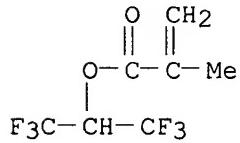
CM 3

CRN 18547-54-1  
CMF C17 H34 O3 Si4



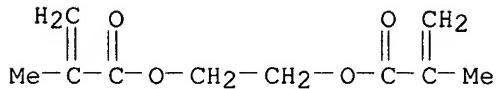
CM 4

CRN 3063-94-3  
CMF C7 H6 F6 O2



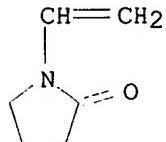
CM 5

CRN 97-90-5  
CMF C10 H14 O4



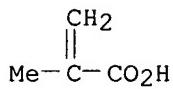
CM 6

CRN 88-12-0  
CMF C6 H9 N O



CM 7

CRN 79-41-4  
CMF C4 H6 O2

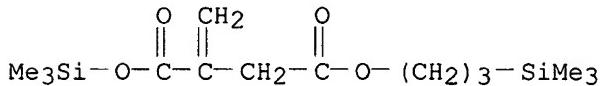


RN 226234-61-3 HCAPLUS

CN Butanedioic acid, methylene-, 1-(trimethylsilyl) 4-[3-(trimethylsilyl)propyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

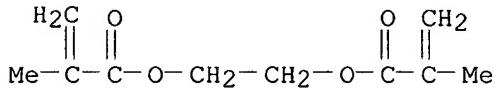
CM 1

CRN 226234-56-6  
CMF C14 H28 O4 Si2



CM 2

CRN 97-90-5  
CMF C10 H14 O4

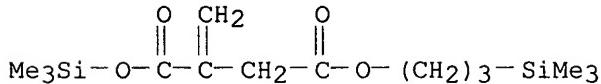


RN 226234-63-5 HCAPLUS

CN Butanedioic acid, methylene-, 1-(trimethylsilyl) 4-[3-(trimethylsilyl)propyl] ester, polymer with N,N-dimethyl-2-propenamide, 1,2-ethanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

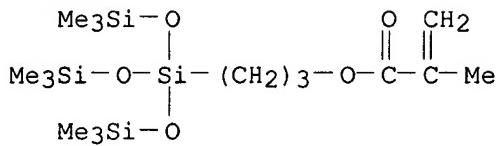
CM 1

CRN 226234-56-6  
CMF C14 H28 O4 Si2

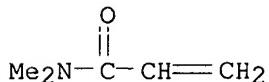


CM 2

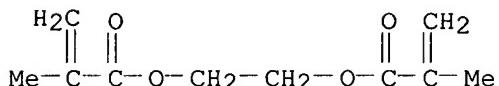
CRN 17096-07-0  
CMF C16 H38 O5 Si4



CM 3

CRN 2680-03-7  
CMF C5 H9 N O

CM 4

CRN 97-90-5  
CMF C10 H14 O4

L61 ANSWER 11 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1999:297250 HCPLUS  
 DN 130:343051  
 TI Crosslinkable sulfone compound and an optical polymeric material employing it  
 IN Hiratani, Haruyuki  
 PA Menicon Co., Ltd., Japan  
 SO Eur. Pat. Appl., 24 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

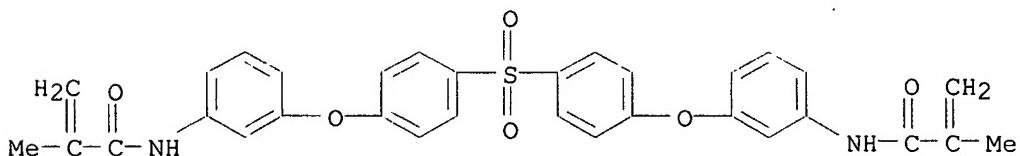
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 913713	A2	19990506	EP 1998-120257	19981026
	EP 913713	A3	20000712	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO	
	JP 11130744	A2	19990518	JP 1997-297268	19971029
	US 6015874	A	20000118	US 1998-178427	19981026
PRAI	JP 1997-297268	A	19971029		
OS	MARPAT	130:343051			
AB	A novel crosslinkable sulfone compd. with two polymerizable unsatd. double bonds and an optical polymeric material prep'd. by employing such a crosslinkable compd. are described. The polymeric material obtained is excellent in hydrophilicity, transparency, UV light absorbing property, deposit resistance and boiling resistance and yet has proper hardness and				

oxygen permeability. A crosslinkable compd., bis[4-(3-methacrylamidophenoxy)phenyl]sulfone, was prep'd. from bis[4-(3-aminophenoxy)phenyl]sulfone and methacrylic acid chloride and then copolymd. with MMA and tris(trimethylsiloxy)silylpropyl methacrylate to obtain an oxygen-permeable hard optical material with small contact angle and improved hydrophilic property and a high **refractive index** and an UV light absorbing property.

IC ICM G02B001-04  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 38, 73  
 ST crosslinkable sulfone optical polymer; contact intraocular lens  
 crosslinkable sulfone polymer  
 IT Intraocular lenses  
     (crosslinkable compd. and an optical material employing it)  
 IT Contact lenses  
     (hard, oxygen-permeable, UV light-absorbing; crosslinkable compd. and an optical material employing it)  
 IT Contact lenses  
     (soft; crosslinkable compd. and an optical material employing it)  
 IT 224425-07-4P  
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
     (crosslinkable compd. and an optical material employing it)  
 IT 224425-07-4P  
 RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
     (crosslinkable compd. and an optical material employing it)  
 RN 224425-07-4 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with N,N'-(sulfonylbis(4,1-phenyleneoxy-3,1-phenylene))bis[2-methyl-2-propenamide] and 3-[3,3,3-trimethyl-1,1-bis(trimethylsilyl)oxy]disiloxanylpropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

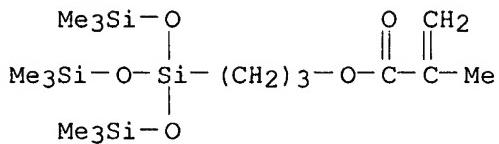
CM 1

CRN 224425-04-1  
 CMF C32 H28 N2 O6 S

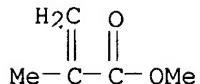


CM 2

CRN 17096-07-0  
 CMF C16 H38 O5 Si4



CM 3

CRN 80-62-6  
CMF C5 H8 O2

L61 ANSWER 12 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1999:206971 HCPLUS  
 DN 130:283120  
 TI Acrylic polymer optical materials having highly hydrophilic surfaces and lipid-staining resistance  
 IN Hiratani, Haruyuki  
 PA Menicon Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11080274	A2	19990326	JP 1997-248426	19970912
AB	The optical materials, which are useful for contact lenses, are obtained by polymn. of monomers contg. ACONHCH(CO2R1)CH2CH2SMe (A = CH2:CR2, CH2:CHC6H4R3, CH2CR4CO2R5OCOC6H3(CO2R6), CH2C(CO2R7)CH2, cis-R8O2CCH:CH, trans-R9O2CCH:CH; R1 = H, C1-3 alkyl, Me3Si; R2, R4 = H, Me; R3 = none, C1-3 alkylene; R5 = C1-5 alkylene; R6-8 = C1-3 alkyl). Thus, methionine Me ester methacrylate 10, tris(trimethylsiloxy)silylpropyl methacrylate 48, 2,2,2,2',2',2'-hexafluoroisopropyl methacrylate 54, and ethylene glycol dimethacrylate 1 part were polymd. at 35-120.degree. for 64 h in the presence of 0.1 part 2,2'-azobis(2,4-dimethylvaleronitrile) to give a transparent polymer with O permeation coeff. 92 mL-cm <sup>2</sup> /cm <sup>3</sup> -s-mmHg, moisture absorption 0.12%, contact angle 69.degree., and refractive index -1.434.				
IC	ICM C08F220-56 ICS A61L027-00; C08F008-06; C08F212-14; C08F220-26; C08F222-38; C08F230-08; G02B001-04; G02C007-02; G02C007-04				
CC	38-3 (Plastics Fabrication and Uses) Section cross-reference(s): 63, 73				
ST	acrylic polymer optical material contact lens; methionine methyl ester methacrylate optical polymer; hydrophilic surface optical material acrylic polymer; lipid staining resistance optical acrylic polymer				
IT	Contact lenses Optical materials Transparent materials				

(acrylic polymer optical materials having highly hydrophilic surfaces and lipid-staining resistance)

IT 222625-63-0P, Ethylene glycol dimethacrylate-2,2,2',2',2'-hexafluoroisopropyl methacrylate-methionine methyl ester methacrylate-tris(trimethylsiloxy)silylpropyl methacrylate-4-vinylbenzyl methacrylate copolymer 222625-65-2P 222625-66-3P  
222634-47-1P 222634-49-3P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic polymer optical materials having highly hydrophilic surfaces and lipid-staining resistance)

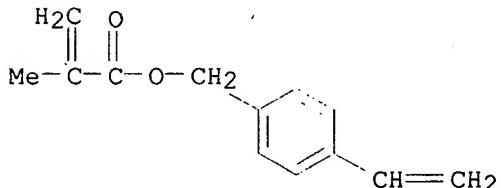
IT 222625-63-0P, Ethylene glycol dimethacrylate-2,2,2',2',2'-hexafluoroisopropyl methacrylate-methionine methyl ester methacrylate-tris(trimethylsiloxy)silylpropyl methacrylate-4-vinylbenzyl methacrylate copolymer 222625-65-2P 222625-66-3P  
222634-47-1P 222634-49-3P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic polymer optical materials having highly hydrophilic surfaces and lipid-staining resistance)

RN 222625-63-0 HCPLUS

CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

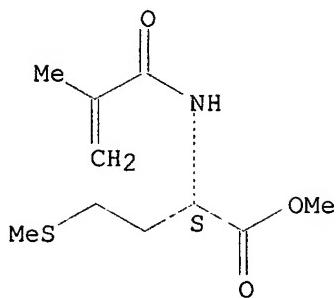
CRN 99413-45-3  
CMF C13 H14 O2



CM 2.

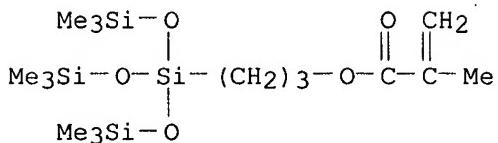
CRN 45159-22-6  
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



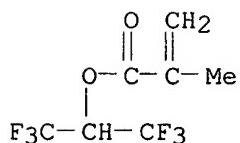
CM 3

CRN 17096-07-0  
CMF C16 H38 O5 Si4



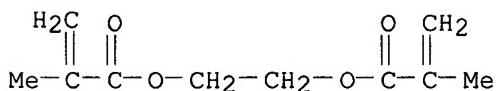
CM 4

CRN 3063-94-3  
CMF C7 H6 F6 O2



CM 5

CRN 97-90-5  
CMF C10 H14 O4

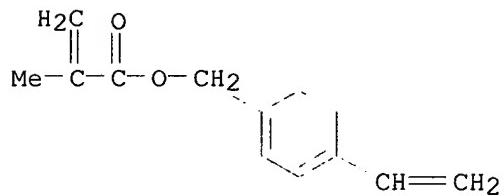


RN 222625-65-2 HCPLUS  
CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis(trimethylsilyl)oxy]disiloxanylpropyl

2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

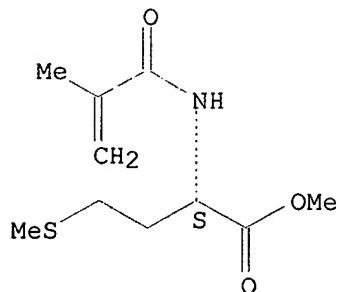
CRN 99413-45-3  
CMF C13 H14 O2



CM 2

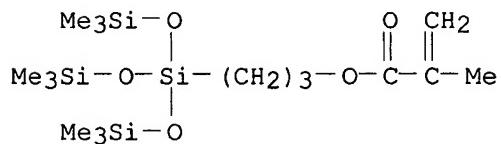
CRN 45159-22-6  
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



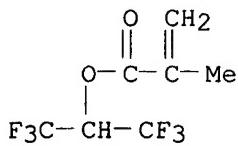
CM 3

CRN 17096-07-0  
CMF C16 H38 O5 Si4



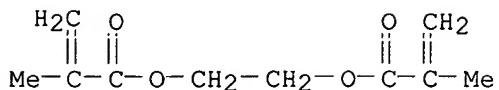
CM 4

CRN 3063-94-3  
CMF C7 H6 F6 O2



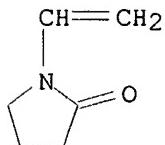
CM 5

CRN 97-90-5  
CMF C10 H14 O4



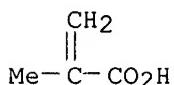
CM 6

CRN 88-12-0  
CMF C6 H9 N O



CM 7

CRN 79-41-4  
CMF C4 H6 O2

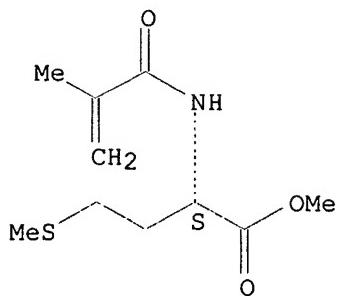


RN 222625-66-3 HCAPLUS  
CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with  
N,N-dimethyl-2-propenamide, 1,2-ethanediyl bis(2-methyl-2-propenoate) and  
3-[3,3,3-trimethyl-1,1-bis(trimethylsilyl)oxy]disiloxanylpropyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

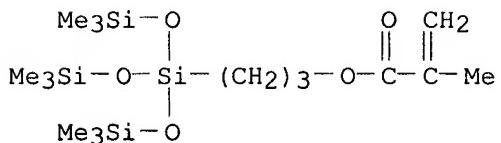
CRN 45159-22-6  
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



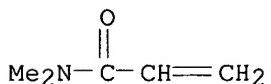
CM 2

CRN 17096-07-0  
CMF C16 H38 O5 Si4



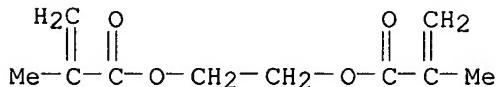
CM 3

CRN 2680-03-7  
CMF C5 H9 N O



CM 4

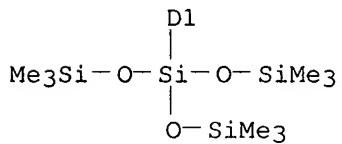
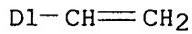
CRN 97-90-5  
CMF C10 H14 O4



RN 222634-47-1 HCPLUS  
CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(ethenylphenyl)-1,1,1,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

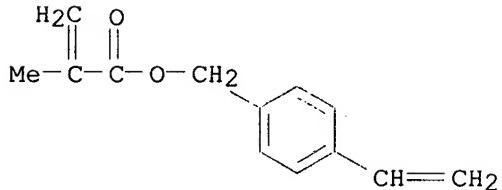
CM 1

CRN 129735-06-4  
CMF C17 H34 O3 Si4  
CCI IDS



CM 2

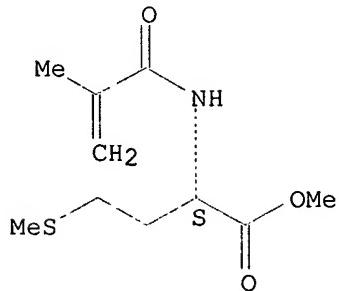
CRN 99413-45-3  
CMF C13 H14 O2



CM 3

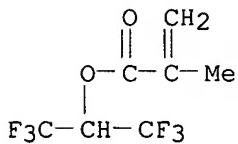
CRN 45159-22-6  
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



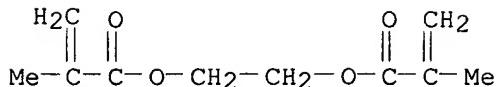
CM 4

CRN 3063-94-3  
CMF C7 H6 F6 O2



CM 5

CRN 97-90-5  
CMF C10 H14 O4

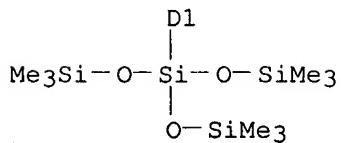
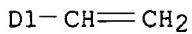


RN 222634-49-3 HCPLUS

CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(ethenylphenyl)-1,1,1,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

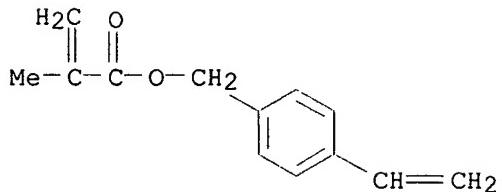
CM 1

CRN 129735-06-4  
CMF C17 H34 O3 Si4  
CCI IDS



CM 2

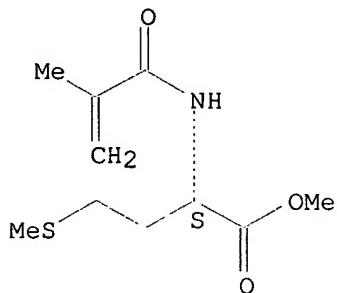
CRN 99413-45-3  
CMF C13 H14 O2



CM 3

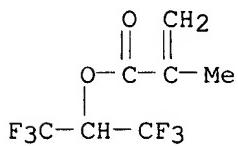
CRN 45159-22-6  
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



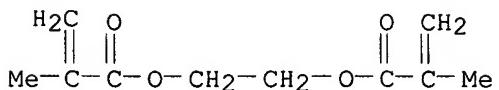
CM 4

CRN 3063-94-3  
CMF C7 H6 F6 O2



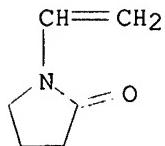
CM 5

CRN 97-90-5  
CMF C10 H14 O4



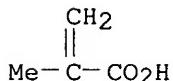
CM 6

CRN 88-12-0  
CMF C6 H9 N O



CM 7

CRN 79-41-4  
CMF C4 H6 O2



L61 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
AN 1999:99281 HCAPLUS  
DN 130:240823  
TI Refractive microlens fabrication by ink-jet process  
AU Biehl, S.; Danzebrink, R.; Oliveira, P.; Aegerter, M. A.  
CS Institut fur Neue Materialien-INM, Department of Coating Technology,  
Saarbrucken, D-66123, Germany  
SO Journal of Sol-Gel Science and Technology (1998), 13(1/2/3), 177-182  
CODEN: JSGTEC; ISSN: 0928-0707  
PB Kluwer Academic Publishers  
DT Journal  
LA English  
AB Microlenses made of hybrid org.-inorg. materials have been fabricated on glass substrates using a com. drop-on-demand ink-jet printing system with a 50 .mu.m diam. nozzle driven by a piezoelec. device and using an org.-inorg. sol. Hybrid org.-inorg. sols have been prep'd. by hydrolysis of methacryloxypropyltrimethoxysilane (MPTS) mixed with an ethanolic soln. of tetraethyleneglycoldimethacrylate (TEGDMA) and 1 to 10 wt.% UV photoinitiator (Irgacure 184). After deposition the drops were polymd. by UV light irradn. The polymn. of the sols during the UV irradn. was followed by Fourier transform IR spectroscopy, particularly analyzing the C=C bonds band at 1636 cm<sup>-1</sup>. The visible near-IR optical transmission of the sol and polymd. material were detd. The polymd. sols are transparent from 375 to 2700 nm and have a refractive index n = 1.5. Viscosity, solvent evapn., drop-substrate wetting condition and drop and substrate temps. are the main parameters which govern the prodn. of reproducible lens shapes. The shape and surface roughness of the lenses have been characterized by at. force microscopy and profilometry. Their optical properties were detd. by light microscopy and spectrophotometric techniques. The printing technique can produce plano-convex spherical microlenses with diams. varying from 50 to 300 .mu.m, focal lengths from 70 .mu.m to 3 mm and f-nos. as low as 0.6. The

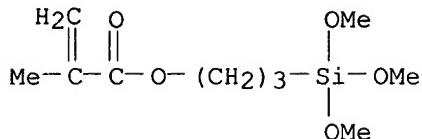
fabrication of one and two dimensional closely spaced microlens arrays should be possible.

CC 57-1 (Ceramics)  
ST Section cross-reference(s): 38, 73  
ST acrylic siloxane hybrid microlens ink jet printing photopolymn;  
IT refractive microlens inorg org hybrid ink jet printing photopolymn  
IT Hybrid organic-inorganic materials  
(acrylic polysiloxane; refractive microlens fabrication by  
ink-jet printing from photopolymerizable hybrid org.-inorg. sols)  
IT Polysiloxanes, preparation  
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(acrylic, lenses; refractive microlens fabrication  
by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)  
IT Inks  
(photocurable, acrylic polysiloxane; refractive microlens  
fabrication by ink-jet printing from photopolymerizable hybrid  
org.-inorg. sols)  
IT Polymerization  
(photopolymn.; refractive microlens fabrication by ink-jet  
printing from photopolymerizable hybrid org.-inorg. sols)  
IT Glass substrates  
Hydrolysis  
Ink-jet printing  
Microlenses  
Refractive index  
Surface roughness  
(refractive microlens fabrication by ink-jet printing from  
photopolymerizable hybrid org.-inorg. sols)  
IT 188784-13-6P  
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(microlens; refractive microlens fabrication by ink-jet  
printing from photopolymerizable hybrid org.-inorg. sols)  
IT 947-19-3, Irgacure 184  
RL: MOA (Modifier or additive use); USES (Uses)  
(photoinitiator; refractive microlens fabrication by ink-jet  
printing from photopolymerizable hybrid org.-inorg. sols)  
IT 188784-13-6P  
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(microlens; refractive microlens fabrication by ink-jet  
printing from photopolymerizable hybrid org.-inorg. sols)  
RN 188784-13-6 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediylxyloxy-2,1-ethanediyl)  
ester, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 2530-85-0

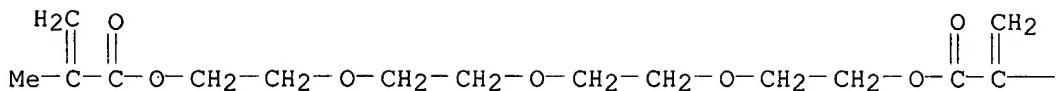
CMF C10 H20 O5 Si



CM 2

CRN 109-17-1  
CMF C16 H26 O7

PAGE 1-A



PAGE 1-B

— Me

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 14 OF 37 HCPLUS COPYRIGHT 2002 ACS  
AN 1998:784736 HCPLUS  
DN 130:111206  
TI Systematic approach to the synthesis of organic-inorganic nanocomposites based on DMTA measurements and IR spectroscopy  
AU Muller, Peter; Becker, Carsten; Schmidt, Helmut  
CS Institut fuer Neue Materialien, Saarbruecken, D-66123, Germany  
SO Materials Research Society Symposium Proceedings (1998),  
519(Organic/Inorganic Hybrid Materials), 387-393  
CODEN: MRSPDH; ISSN: 0272-9172  
PB Materials Research Society  
DT Journal  
LA English  
AB Sol-gel derived org.-inorg. hybrid materials with potential fields of application as **refractive** optical components for example laser diode bars and **ophthalmic lenses** are presented. The main components of the hybrid materials under investigation are precondensed methacryloxypropyltrimethoxysilane (MPTS, denoted: M) with an organically polymerizable methacrylic functionality and tetraethylene glycol dimethacrylate (TEGDMA, denoted: T) as crosslinking org. monomer with two polymerizable double bonds. The molar ratios of the components ranged from M/T 10/90 up to M/T 70/30. The polymer derived from pure TEGDMA (M/T 0/100) served as a ref. material. In addn. to this nanoscaled TiO<sub>2</sub> particles (5 wt.% and 10 wt.%) were incorporated in the org.-inorg. M/T 30/70 matrix to increase the **refractive** index of the resulting nanocomposites. For the prepн. of the different systems, precondensed MPTS was mixed with TEGDMA, the nanoparticulate titania sol

(when used), an appropriate photoinitiator and a thermoinitiator. The reaction mixts. were polymd. photochem. and/or thermally. The propagation of the free radical polymn. reaction after photopolymn. and subsequent thermal curing was followed by IR-spectroscopy, showing that the degree of double bond conversion is strongly increased by the thermal curing step. Incorporation of increasing amts. of TiO<sub>2</sub> nanoparticles resulted in redn. of the double bond conversion compared to the corresponding unfilled system. The homogeneous dispersion of the titania particles in the completely cured M/T 30/70 matrix could be manifested by high resoln. transmission electron microscopy (HTEM). The thermomech. properties of the completely cured nanocomposites were monitored by dynamic mech. thermal anal. (DMTA) showing a strong dependence on compn.

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 63, 73

IT 188784-13-6P, .gamma.-Methacryloxypropyltrimethoxysilane-tetraethylene glycol dimethacrylate copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(systematic approach to synthesis of org.-inorg. nanocomposites based on DMTA measurements and IR spectroscopy)

IT 188784-13-6P, .gamma.-Methacryloxypropyltrimethoxysilane-tetraethylene glycol dimethacrylate copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(systematic approach to synthesis of org.-inorg. nanocomposites based on DMTA measurements and IR spectroscopy)

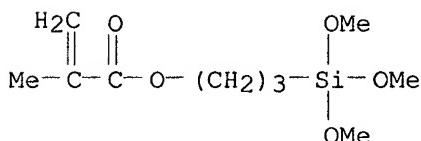
RN 188784-13-6 HCPLUS

CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediyoxy-2,1-ethanediyl)ester, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2530-85-0

CMF C10 H20 O5 Si

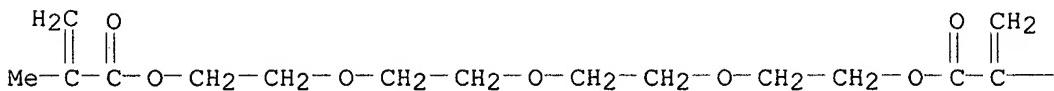


CM 2

CRN 109-17-1

CMF C16 H26 O7

PAGE 1-A



-- Me

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 15 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1998:612143 HCPLUS  
 DN 129:232082  
 TI UV-curable transparent epoxy-containing polysiloxane coating compositions having index refraction matched to substrates and good abrasion resistance and tintability  
 IN Treadway, Gerald D.  
 PA The Walman Optical Company, USA  
 SO PCT Int. Appl., 15 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9839390	A1	19980911	WO 1998-US4845	19980306
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 6100313	A	20000808	US 1997-813559	19970307
	AU 9865517	A1	19980922	AU 1998-65517	19980306
PRAI	US 1997-813559	A	19970307		
	WO 1998-US4845	W	19980306		
AB	The volatile-free coating compn., useful for eyeglass lenses or other transparent substrates, comprises (a) a binder component contg. a polymerizable hydrolyzed epoxy-functional alkoxy silane precursor, a polymerizable ether (e.g., glycidyl ether), an ethylenically unsatd. monomer (e.g., acrylic monomer having acrylic functionality .1toreq.2), and (b) a curing agent component contg. a cationic photoinitiator and a free radical photoinitiator. Thus, 25.35 parts partially hydrolyzed .gamma.-glycidoxypolytrimethoxysilane was mixed with butanediol diacrylate 23.47, trimethylolpropane triglycidyl ether 37.55, UVI 6974 (triarylsulfonium photoinitiator) 9.39, Darocure 1173 (2-hydroxy-2-methyl-1-phenylpropane-1-one) 2.35, Ebecryl 1360 (acrylated silicone flow control agent) 1.89 parts, spin coated onto a polycarbonate substrate and cured using 300 W/in-mercury bulb, showing scratch resistance <1% haze, tintability <10% transmission and adhesion after tint 100%.				
IC	ICM C09D004-00 ICS C08F216-00; C08F222-10; C08G059-30; C08G059-32				
CC	42-10 (Coatings, Inks, and Related Products) Section cross-reference(s): 73				
ST	epoxy polysiloxane coating transparency eyeglass lenses; abrasion resistance acrylic epoxy polysiloxane coating; photocurable				

glycidyl ether acrylic siloxane coating; glycidoxypropyltrimethoxysilane  
butanediol diacrylate copolymer photoinitiating; trimethylolpropane  
triglycidyl ether copolymer photoinitiating

IT Eyeglass lenses  
(UV-curable transparent epoxy-contg. polysiloxane coating compns.  
having index **refraction** matched to substrates and good  
abrasion resistance and tintability for)

IT Coating materials  
Coating materials  
(abrasion-resistant, UV-curable; UV-curable transparent epoxy-contg.  
polysiloxane coating compns. having index **refraction** matched  
to substrates and good abrasion resistance and tintability)

IT Polysiloxanes, uses  
Polysiloxanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-epoxy; UV-curable transparent epoxy-contg. polysiloxane  
coating compns. having index **refraction** matched to substrates  
and good abrasion resistance and tintability for)

IT Epoxy resins, uses  
Epoxy resins, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polysiloxane-; UV-curable transparent epoxy-contg.  
polysiloxane coating compns. having index **refraction** matched  
to substrates and good abrasion resistance and tintability for)

IT 212850-24-3P 212850-25-4P 212850-26-5P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)  
(UV-curable transparent epoxy-contg. polysiloxane coating compns.  
having index **refraction** matched to substrates and good  
abrasion resistance and tintability)

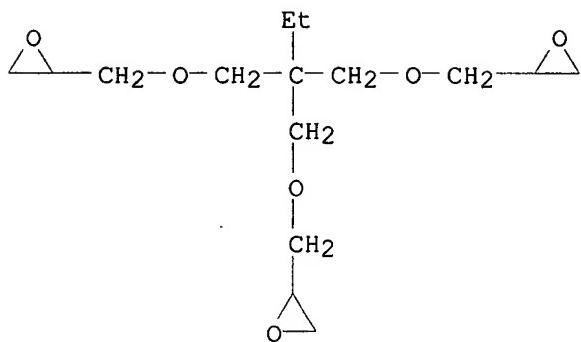
IT 212850-24-3P 212850-25-4P 212850-26-5P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)  
(UV-curable transparent epoxy-contg. polysiloxane coating compns.  
having index **refraction** matched to substrates and good  
abrasion resistance and tintability)

RN 212850-24-3 HCPLUS

CN 2-Propenoic acid, 1,4-butanediyl ester, polymer with 2,2'-[[2-ethyl-2-  
[(oxiranylmethoxy)methyl]-1,3-propanediyl]bis(oxymethylene)]bis[oxirane]  
and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

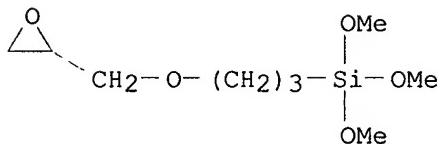
CM 1

CRN 3454-29-3  
CMF C15 H26 O6



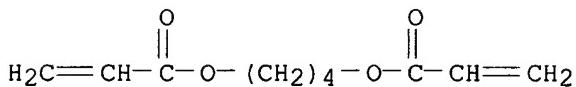
CM 2

CRN 2530-83-8  
CMF C9 H20 O5 Si



CM 3

CRN 1070-70-8  
CMF C10 H14 O4

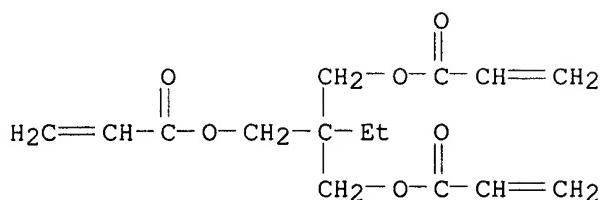


RN 212850-25-4 HCAPLUS

CN 2-Propenoic acid, 1,4-butanediyl ester, polymer with 2,2'-{[2-ethyl-2-[(oxiranylmethoxy)methyl]-1,3-propanediyl]bis(oxymethylene)}bis[oxirane], 2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

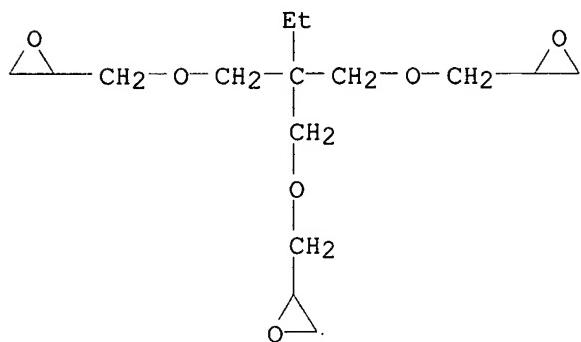
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CRN 15625-89-5  
CMF C15 H20 O6



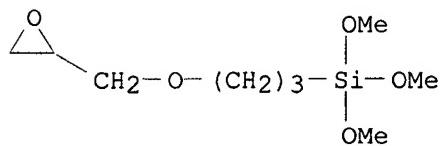
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CRN 3454-29-3  
CMF C15 H26 O6



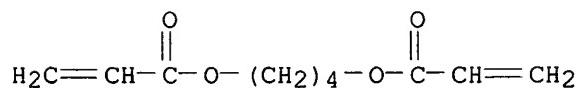
CM 3

CRN 2530-83-8  
CMF C9 H20 O5 Si



CM 4

CRN 1070-70-8  
CMF C10 H14 O4

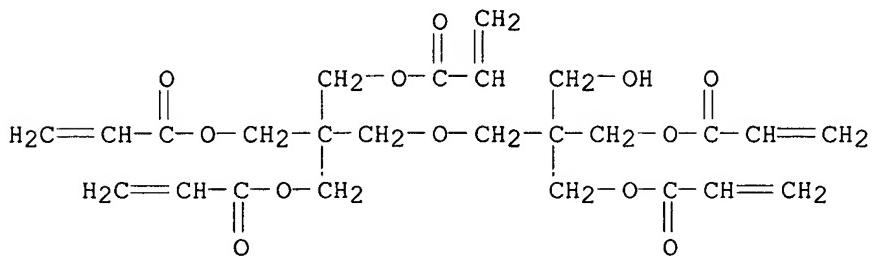


RN 212850-26-5 HCAPLUS  
CN 2-Propenoic acid, 1,4-butanediyl ester, polymer with 1,4-bis[(ethenylmethoxy)methyl]cyclohexane, 2-[3-hydroxy-2,2-bis[[1-oxo-2-

propenyl)oxy]methyl]propoxy]methyl]-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

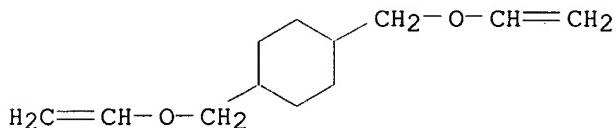
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CRN 60506-81-2  
CMF C25 H32 O12



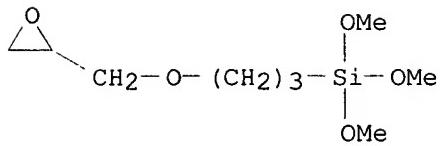
CM 2

CRN 17351-75-6  
CMF C12 H20 O2



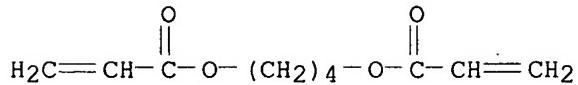
CM 3

CRN 2530-83-8  
CMF C9 H20 O5 Si



CM 4

CRN 1070-70-8  
CMF C10 H14 O4



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 16 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1998:344416 HCAPLUS  
 DN 129:19734  
 TI Ocular lens material with good surface wettability,  
 transparency, and high **refractive** index  
 IN Hiratani, Haruyuki  
 PA Menicon Co., Ltd., Japan  
 SO Eur. Pat. Appl., 20 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 843184	A2	19980520	EP 1997-119373	19971105
	EP 843184	A3	19990107		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 10148797	A2	19980602	JP 1996-306482	19961118
PRAI	JP 1996-306482		19961118		
AB	The title ocular lens material is made from polymers obtained by polymg. polymerizable components contg. a monomer $\text{CH}_2=\text{CH}(\text{R}1)\text{CO}_2(\text{CH}_2)_n\text{OCOX}$ (I; R1 = H, Me, $\text{CH}_2=\text{CHC}_4\text{H}_4-$ ; n = 1-5; and X = carboxyphenyl, dicarboxyphenyl, carboxynaphthalenyl, or carboxycyclohexyl). Use of the above monomer enables manuf. of ocular lens material with excellent surface wettability and transparency, high <b>refractive</b> index, and a relatively high hardness. The materials are useful for contact lenses, intraocular lenses, or artificial corneas. Thus, 2-hydroxyethyl methacrylate monophthalate ester, I (where R1 = Me, n = 2, and X = 2-carboxyphenyl), was polymd. with Me methacrylate and ethylene glycol dimethacrylate to give a transparent ocular lens material having <b>refractive</b> index 1.525, contact angle <20.degree. and Shore D hardness 95. The material had higher <b>refractive</b> index, small contact angles, and hardness equal to or greater than ocular lens material prep'd. from a Me methacrylate-ethylene glycol dimethacrylate copolymer.				
IC	ICM G02B001-04 ICS C08F220-26; C08F246-00				
CC	63-7 (Pharmaceuticals) Section cross-reference(s): 38, 73				
ST	ocular lens material transparent high <b>refractive</b> ; methacrylate polymer ocular lens; wettable transparent ocular lens polymer				
IT	<b>Eye</b> (artificial cornea; transparent ocular lens material with good surface wettability, high <b>refractive</b> index, and good hardness)				
IT	<b>Lenses</b> (ocular; transparent ocular lens material with good surface wettability, high <b>refractive</b> index, and good hardness)				
IT	<b>Contact lenses</b> <b>Intraocular lenses</b> (transparent ocular lens material with good surface wettability, high <b>refractive</b> index, and good hardness)				
IT	Acrylic polymers, biological studies RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use);				

BIOL (Biological study); PREP (Preparation); USES (Uses)  
(transparent ocular lens material with good surface  
wettability, high refractive index, and good hardness)

IT 207730-91-4P 207730-92-5P 207800-27-9P  
RL: IMF (Industrial manufacture); PRP (Properties); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)  
(transparent ocular lens material with good surface  
wettability, high refractive index, and good hardness)

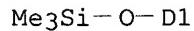
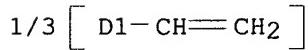
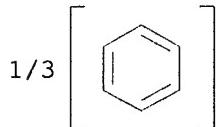
IT 207800-27-9P  
RL: IMF (Industrial manufacture); PRP (Properties); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)  
(transparent ocular lens material with good surface  
wettability, high refractive index, and good hardness)

RN 207800-27-9 HCPLUS

CN 1,2-Benzene dicarboxylic acid, mono[2-[(2-methyl-1-oxo-2-  
propenyl)oxy]ethyl] ester, polymer with [(ethenylbenzenetriyl)tris(oxy)]tr  
is(trimethylsilane], (ethenylphenyl)methyl 2-methyl-2-propenoate and  
methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 207800-26-8  
CMF C17 H32 O3 Si3  
CCI IDS

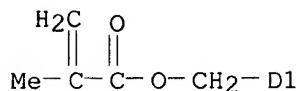


CM 2

CRN 114573-55-6  
CMF C13 H14 O2  
CCI IDS

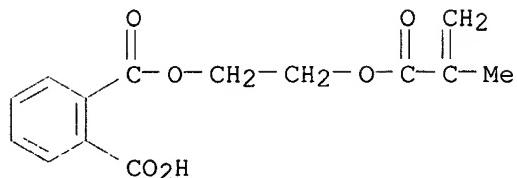


D1-CH=CH<sub>2</sub>



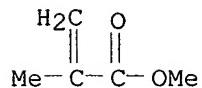
CM 3

CRN 27697-00-3  
CMF C14 H14 O6



CM 4

CRN 80-62-6  
CMF C5 H8 O2



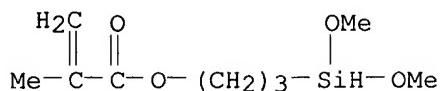
L61 ANSWER 17 OF 37 HCPLUS COPYRIGHT 2002 ACS  
AN 1998:334681 HCPLUS  
DN 129:55220  
TI Heat-resistant lens materials and manufacture of lenses  
using the same, with high refractive index and Abbe number and  
adhesion to mold during cast polymerization  
IN Amagai, Shoichi; Shimuta, Masanori; Watari, Isao  
PA Mitsubishi Gas Chemical Co., Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE  
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PI JP 10139881 A2 19980526 JP 1996-295202 19961107  
AB The title materials are obtained by polymg. (A) 5-70% compns. contg. .gtoreq.1 (meth)acrylate compds. having 2-6 (meth)acryloyl groups, (B) 15-35% compns. comprising divinylbenzene and compds. having arom. vinyl group and (meth)acryloyl group, (C) 15-60% compns. (S content .gtoreq.35%) from aliph. polymercaptopropane compds. contg. .gtoreq.2 mercapto groups and no electron-withdrawing groups, and (D) silane compds. (1-10 Si) at (A + B + C):D = 100:0.0001-5 and [overall arom. vinyl + overall (meth)acryloyl group]/overall mercapto group molar ratio 1.3-7 and have refractive index 1.54-1.64. Pentaerythritol tetraacrylate 49, 96:4 divinylbenzene-Et vinyl ether 33, 3-methacryloyloxypropyltrimethoxysilane 0.05, and bis(2-mercaptoethyl) sulfide 18 parts were polymd. in the presence of tert-butylperoxy iso-Pr carbonate in a glass mold to obtain a lens with refractive index 1.581, Abbe no. 41, Vicat softening point 135.degree., and good release properties and showing no peeling during polymn.

IC ICM C06G075-04  
ICS C08B003-00; C08G077-28; G02B001-04; G02C007-02  
CC 38-3 (Plastics Fabrication and Uses)  
ST acrylic lens peeling resistance cast polymn  
IT Lenses  
(heat-resistant lens materials and manuf. of lenses using the same, with high refractive index and Abbe no. and adhesion to mold during cast polymn.)  
IT 208757-90-8P, Divinylbenzene-ethyl vinyl ether-(3-methacryloyloxypropyl)dimethoxysilane-pentaerythritol tetraacrylate copolymer  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(heat-resistant lens materials and manuf. of lenses using the same, with high refractive index and Abbe no. and adhesion to mold during cast polymn.)  
IT 3570-55-6, Bis(2-mercaptoethyl) sulfide 136122-15-1, 2,5-Bis(mercaptopropyl)-1,4-dithiane 149334-77-0, 2-(2-Mercaptoethylthio)-1,3-dimercaptopropane  
RL: NUU (Other use, unclassified); USES (Uses)  
(heat-resistant lens materials and manuf. of lenses using the same, with high refractive index and Abbe no. and adhesion to mold during cast polymn.)  
IT 208757-90-8P, Divinylbenzene-ethyl vinyl ether-(3-methacryloyloxypropyl)dimethoxysilane-pentaerythritol tetraacrylate copolymer  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(heat-resistant lens materials and manuf. of lenses using the same, with high refractive index and Abbe no. and adhesion to mold during cast polymn.)  
RN 208757-90-8 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, 3-(dimethoxysilyl)propyl ester, polymer with 2,2-bis[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, diethenylbenzene and ethoxyethene (9CI) (CA INDEX NAME)

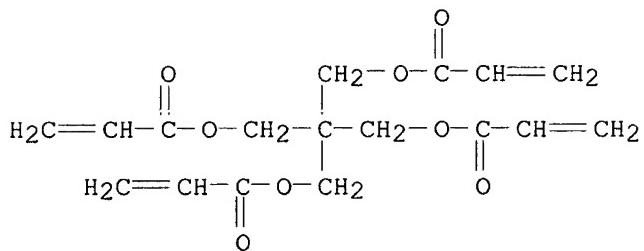
CM 1

CRN 100577-12-6  
CMF C9 H18 O4 Si



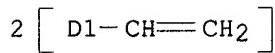
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CRN 4986-89-4  
CMF C17 H20 O8



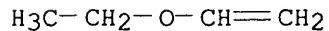
CM 3

CRN 1321-74-0  
CMF C10 H10  
CCI IDS



CM 4

CRN 109-92-2  
CMF C4 H8 O



L61 ANSWER 18 OF 37 HCPLUS COPYRIGHT 2002 ACS  
AN 1997:700873 HCPLUS  
DN 127:319551  
TI Electrically induced concentration profiles of nanoparticles in a  
MMA-silane matrix: a new method to obtain GRIN-lenses  
AU Oliveira, P. W.; Krug, H.; Schmidt, H.  
CS Institut Neue Materialien, Saarbruecken, D-66123, Germany

SO Proceedings of SPIE-The International Society for Optical Engineering (1997), 3136(Sol-Gel Optics IV), 442-451  
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

AB A new technique to produce a radial gradient in the **refractive index** (r-GRIN) in org.-inorg. nanocomposite materials using sol-gel techniques in combination with electrophoretically induced concn. profiles of oxide nanoparticles is presented. The composite material is based on methacryloxypropyltrimethoxysilane (MPTS), zirconium n-propoxide (ZR), Methacrylic acid (MA) and tetraethylene glycol dimethacrylate (TEGDMA). Irgacure 184 was used as a photosensitive initiator. The surface of these particles is enriched with MA which is linked by a chelating complex to the initial ZR component. The TEGDMA component is used to introduce more flexibility in the org. inorg. network and to reduce polymn. stresses. Elec. charges on the ZrO<sub>2</sub> nanoparticle surface force the particles to diffuse in the gel state by elec. fields employed by appropriate electrodes in presence of an elec. field. The movement and interdiffusion of the Zr-nanoparticles in the matrix were measured by zeta-potential measurements and by photon-correlation spectroscopy. In the performed expts., a radial elec. field amplitude of 200 V/cm was used and held for 5 h keeping the material in the gel state. The variation of **refractive index** in real time was measured by Mach-Zehnder interferometry. After the electrophoretic process, a polymn. step was carried out to immobilize the .DELTA.n gradient. .DELTA.N was measured by ellipsometry and the value of 0.07 was obtained for a sample of 1 cm in diam. The form of the concn. profile and hence from the index profile was detected by energy dispersive x-ray anal. measurements.

CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 73

ST sol gel nanoparticle zirconium methacryloxypropyltrimethoxysilane; lens sol gel nanoparticle zirconium methacryloxypropyltrimethoxysilane; electrophoresis sol gel nanoparticle zirconium methacryloxypropyltrimethoxysilane

IT Electrophoresis  
    Lenses  
    Nanoparticles  
    **Refractive index**  
    Sol-gel processing  
    Zeta potential  
        (elec. induced concn. profiles of sol-gel nanoparticles in methacrylate-silane matrix for GRIN lenses)

IT 197656-95-4P, Methacrylic acid-methacryloxypropyltrimethoxysilane-tetraethylene glycol dimethacrylate-zirconium n-propoxide copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
    (elec. induced concn. profiles of sol-gel nanoparticles in methacrylate-silane matrix for GRIN lenses)

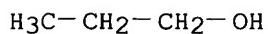
IT 197656-95-4P, Methacrylic acid-methacryloxypropyltrimethoxysilane-tetraethylene glycol dimethacrylate-zirconium n-propoxide copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
    (elec. induced concn. profiles of sol-gel nanoparticles in methacrylate-silane matrix for GRIN lenses)

RN 197656-95-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with oxybis(2,1-ethanediyl-2,1-ethanediyl) bis(2-methyl-2-propenoate), 1-propanol zirconium(4+) salt and

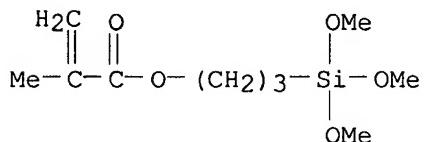
3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 23519-77-9  
CMF C3 H8 O . 1/4 Zr

1/4 Zr(IV)

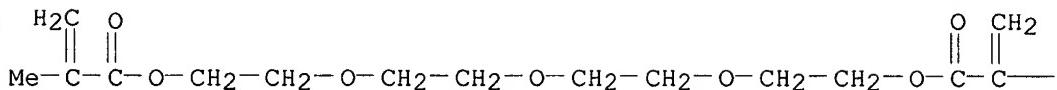
CM 2

CRN 2530-85-0  
CMF C10 H20 O5 Si

CM 3

CRN 109-17-1  
CMF C16 H26 O7

PAGE 1-A

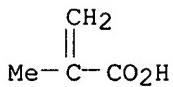


PAGE 1-B

— Me

CM 4

CRN 79-41-4  
CMF C4 H6 O2



L61 ANSWER 19 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1996:319129 HCPLUS  
 DN 125:67846  
 TI Intraocular lenses comprising high **refractive** index siloxanes and high **refractive** index polymeric resin components  
 IN Yang, Shih Liang S.  
 PA Allergan, Inc., USA  
 SO U.S., 8 pp., Cont.-in-part of U.S. Ser. No. 48,092, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5512609	A	19960430	US 1994-193966	19940209
	US 5233007	A	19930803	US 1992-868412	19920414
	WO 9521889	A1	19950817	WO 1995-US1636	19950207
	W: AU, CA, JP RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9519138	A1	19950829	AU 1995-19138	19950207
	EP 743967	A1	19961127	EP 1995-911645	19950207
	R: DE, FR, GB, NL, SE				
	JP 09508665	T2	19970902	JP 1995-521320	19950207
	US 5623029	A	19970422	US 1995-473393	19950607
PRAI	US 1992-868412		19920414		
	US 1993-48092		19930415		
	US 1994-193966		19940209		
	WO 1995-US1636		19950207		
AB	Intraocular lenses comprise high <b>refractive</b> index polysiloxane-based cross-linked copolymers and high <b>refractive</b> index polymeric resin components. Such compns., which have <b>refractive</b> indexes of at least about 1.46, preferably at least about 1.48, are useful in producing foldable intraocular lenses. Tetramethylstyrylcyclotetrasiloxane 1088, and 1,2-divinyltetramethyldisiloxane 6 g were heated under N followed by addn. of 0.18% tetra-Me ammonia hydroxide to obtained a mixt. having <b>refractive</b> index of 1.52-1.54. A MQ resin having <b>refractive</b> index of 1.53 was added to above polymer so that the resin was equal to 10% by wt. of the total batch followed by addn. of tetra-Me ammonia hydroxide and liq. organohydrogen polysiloxane having a <b>refractive</b> index of 1.50 to obtain a reinforced elastomeric compn. for intraocular lenses.				
IC	ICM G02C007-04 ICS C08L083-05; C08L083-07				
NCL	523107000				
CC	63-7 (Pharmaceuticals)				
ST	Section cross-reference(s): 35, 38				
IT	intraocular lense siloxane resin <b>refractive</b> index Siloxanes and Silicones, biological studies RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (intraocular lenses comprising high <b>refractive</b>				

index siloxanes and high refractive index polymeric resin components)

IT Lenses

(intraocular, intraocular lenses comprising high refractive index siloxanes and high refractive index polymeric resin components)

IT 100-42-5, Styrene, reactions 2370-88-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(intraocular lenses comprising high refractive index siloxanes and high refractive index polymeric resin components)

IT 170443-66-0P 178266-34-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intraocular lenses comprising high refractive index siloxanes and high refractive index polymeric resin components)

IT 178266-34-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intraocular lenses comprising high refractive index siloxanes and high refractive index polymeric resin components)

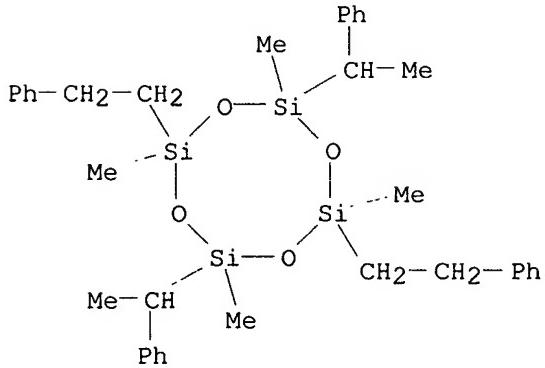
RN 178266-34-7 HCPLUS

CN Cyclotetrasiloxane, 2,4,6,8-tetramethyl-2,6-bis(1-phenylethyl)-4,8-bis(2-phenylethyl)-, polymer with 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 170443-66-0

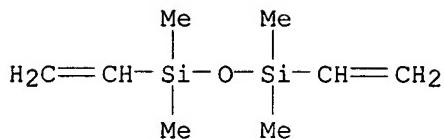
CMF C36 H48 O4 Si4



CM 2

CRN 2627-95-4

CMF C8 H18 O Si2



L61 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2002 ACS

AN 1995:928205 HCAPLUS

DN 123:322181

TI Intraocular lenses made from high **refractive index** elastomeric compositions

IN Yang, Shih-Liang Stanley

PA Allergan, Inc., USA

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9521889	A1	19950817	WO 1995-US1636	19950207
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5512609	A	19960430	US 1994-193966	19940209
	AU 9519138	A1	19950829	AU 1995-19138	19950207
	EP 743967	A1	19961127	EP 1995-911645	19950207
	R: DE, FR, GB, NL, SE				
	JP 09508665	T2	19970902	JP 1995-521320	19950207
PRAI	US 1994-193966		19940209		
	US 1992-868412		19920414		
	US 1993-48092		19930415		
	WO 1995-US1636		19950207		
AB	Elastomeric compns. comprising high <b>refractive index</b> polysiloxane-based cross-linked copolymers and high <b>refractive index</b> polymeric resin components are used for the prepn. of foldable intraocular lenses. Tetramethylstyrylcyclotetrasiloxane (prepn. given) 1088, and 2-divinyltetramethyldisiloxane 6g were mixed, followed by addn. of tetra-Me ammonia hydroxide as catalyst and heated for 3h N at 100.degree. to obtain vinyl-terminated methyl-styrylpolysiloxane which was used in prepn. of intraocular lenses.				
IC	ICM C08L083-04				
	ICS G02B001-04				
CC	63-7 (Pharmaceuticals)				
	Section cross-reference(s): 35, 38				
ST	intraocular lens high <b>refractive index</b> elastomer				
IT	Lenses				
	(intraocular, intraocular lenses made from high <b>refractive index</b> elastomeric compns.)				
IT	87564-11-2P				
	RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				
	(intraocular lenses made from high <b>refractive index</b> elastomeric compns.)				
IT	100-42-5, Styrene, reactions 2370-88-9				
	RL: RCT (Reactant); RACT (Reactant or reagent)				
	(intraocular lenses made from high <b>refractive index</b>				

elastomeric compns.)

IT 170443-66-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (intraocular lenses made from high refractive index elastomeric compns.)

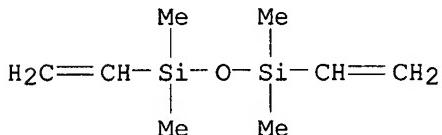
IT 87564-11-2P  
 RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (intraocular lenses made from high refractive index elastomeric compns.)

RN 87564-11-2 HCPLUS

CN Cyclotetrasiloxane, 2,4,6,8-tetramethyl-, polymer with 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX NAME)

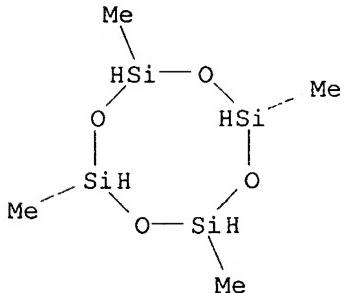
CM 1

CRN 2627-95-4  
 CMF C8 H18 O Si2



CM 2

CRN 2370-88-9  
 CMF C4 H16 O4 Si4



L61 ANSWER 21 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1995:638066 HCPLUS  
 DN 123:34101  
 TI Effect of structure of fluorinated oxygen-containing monomers on properties of fluoroorganosilicon polymers  
 AU Rakhimov, A. I.; Kryukova, E. G.; Vostrikova, O. V.  
 CS Inst. Khim. Probl. Ekol., Volgograd, Russia  
 SO Zhurnal Organicheskoi Khimii (1994), 30(8), 1217-18  
 CODEN: ZORKAE; ISSN: 0514-7492  
 PB Nauka

DT Journal

LA Russian

AB The effects of length and structure of fluoroalkyl and fluorooxyalkyl chains in corresponding (meth)acrylates on water sorption, d., refractive index, and light transmission by their copolymers with vinyltrioxysilane and nonfluoro methacrylates were studied. Fluorooxyalkyl chains, having increased electron d., improved hydrophilic properties of the fluorinated acrylic silsesquioxanes intended for the manuf. of contact lenses. The copolymers were prep'd. by peroxide-initiated or photochem. radical polymn., followed by alk. hydrolysis.

CC 36-5 (Physical Properties of Synthetic High Polymers)

Section cross-reference(s): 63

ST fluoroalkyl acrylate vinyltrioxysilane copolymer property; fluorooxyalkyl methacrylate vinyltrioxysilane copolymer property; silsesquioxane acrylic fluoropolymer property; contact lens silsesquioxane acrylic fluoropolymer; optical property silsesquioxane acrylic fluoropolymer; water sorption silsesquioxane acrylic fluoropolymer

IT Refractive index and Optical refraction

Sorption

(length and structure of fluoroalkyl and fluorooxyalkyl chains in (meth)acrylates and properties of their copolymers with vinyltrioxysilane)

IT Lenses

(contact, length and structure of fluoroalkyl and fluorooxyalkyl chains in (meth)acrylates and properties of their copolymers with vinyltrioxysilane)

IT 164354-58-9P 164354-61-4P 164354-63-6P

164354-64-7P

RL: NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(length and structure of fluoroalkyl and fluorooxyalkyl chains in (meth)acrylates and properties of their copolymers with vinyltrioxysilane)

IT 164354-58-9P 164354-61-4P 164354-63-6P

164354-64-7P

RL: NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(length and structure of fluoroalkyl and fluorooxyalkyl chains in (meth)acrylates and properties of their copolymers with vinyltrioxysilane)

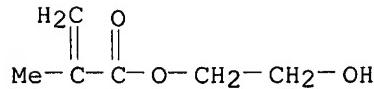
RN 164354-58-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenyltrioxysilane, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2,2,3,3,4,4,5,5-octafluoropentyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

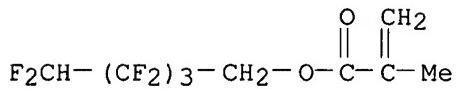
CRN 868-77-9

CMF C6 H10 O3



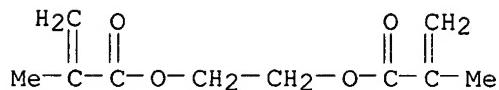
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CRN 355-93-1  
CMF C9 H8 F8 O2



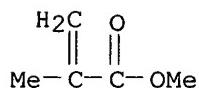
CM 3

CRN 97-90-5  
CMF C10 H14 O4



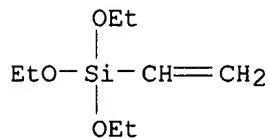
CM 4

CRN 80-62-6  
CMF C5 H8 O2



CM 5

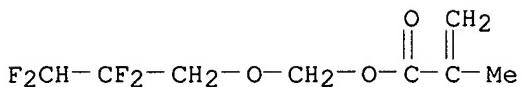
CRN 78-08-0  
CMF C8 H18 O3 Si



RN 164354-61-4 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenyltriethoxysilane, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and (2,2,3,3-tetrafluoropropoxy)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

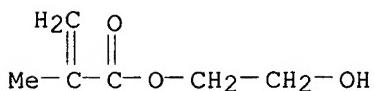
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CRN 164354-59-0  
CMF C8 H10 F4 O3



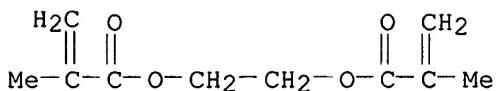
CM 2

CRN 868-77-9  
CMF C6 H10 O3



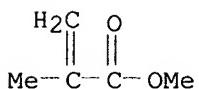
CM 3

CRN 97-90-5  
CMF C10 H14 O4



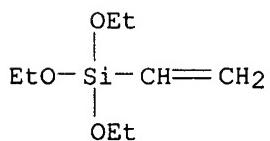
CM 4

CRN 80-62-6  
CMF C5 H8 O2



CM 5

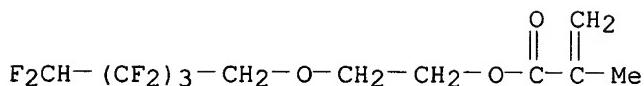
CRN 78-08-0  
CMF C8 H18 O3 Si



RN 164354-63-6 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenyltriethoxysilane, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-[(2,2,3,3,4,4,5,5-octafluoropentyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

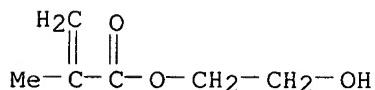
CM 1

CRN 59006-70-1  
CMF C11 H12 F8 O3



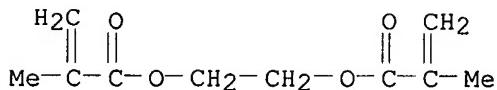
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CRN 868-77-9  
CMF C6 H10 O3



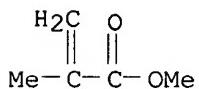
CM 3

CRN 97-90-5  
CMF C10 H14 O4



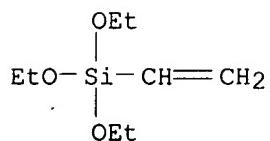
CM 4

CRN 80-62-6  
CMF C5 H8 O2



CM 5

CRN 78-08-0  
CMF C8 H18 O3 Si



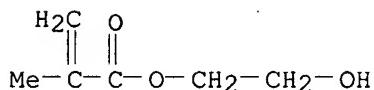
RN 164354-64-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenyltriethoxysilane, 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

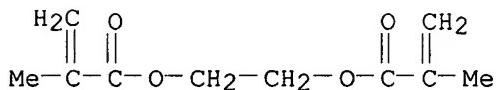
CMF C6 H10 O3



CM 2

CRN 97-90-5

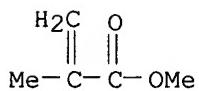
CMF C10 H14 O4



CM 3

CRN 80-62-6

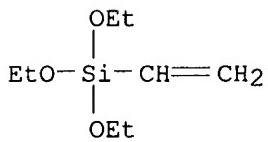
CMF C5 H8 O2



CM 4

CRN 78-08-0

CMF C8 H18 O3 Si



L61 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2002 ACS

AN 1993:656573 HCAPLUS

DN 119:256573

TI Intraocular lenses containing high-refractive index  
silicones

IN Yang, Shih Liang S.

PA Allergan, Inc., USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5233007	A	19930803	US 1992-868412	19920414
	WO 9321258	A1	19931028	WO 1993-US3497	19930413
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9342853	A1	19931118	AU 1993-42853	19930413
	AU 664290	B2	19951109		
	EP 636155	A1	19950201	EP 1993-912235	19930413
	EP 636155	B1	19980715		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 07505914	T2	19950629	JP 1993-518581	19930413
	AT 168392	E	19980815	AT 1993-912235	19930413
	ES 2118959	T3	19981001	ES 1993-912235	19930413
	US 5512609	A	19960430	US 1994-193966	19940209
	US 5420213	A	19950530	US 1994-226223	19940411
	US 5623029	A	19970422	US 1995-473393	19950607
PRAI	US 1992-868412		19920414		
	WO 1993-US3497		19930413		
	US 1993-48092		19930415		
	US 1994-193966		19940209		
AB	A siloxane R3[Si(R1R2R4)O] <sub>n</sub> (SiR2O) <sub>m</sub> SiR2R3 [R, R4 = independently (substituted) alkyl, (substituted) aryl; R1 = independently a divalent radical; R2 = independently (substituted aryl; R3 = monovalent (substituted) hydrocarbyl with multiple bond; n = 6-500; m = 0-500], useful for prep. intraocular lenses with refractive index .gt; or = 1.46 are prepd. The polymers can be crosslinked with, e.g., an organohydrogenpolysiloxane (I). Thus, reaction of tetramethyltetrahydrocyclosiloxane and styrene at 40-75.degree. in presence of Pt catalyst gave the PhCH2CH2 and PhCHMe tetrasubstituted tetramethylcyclotetrasiloxane, which reacted under N at 100.degree. in presence of Me4NOH to give vinyl-terminated methylstyrylpolysiloxane (styryl = PhCH2CH2 or PhCHMe) (II) with refractive index = 1.54; crosslinking II with I gave an elastomer suitable for making intraocular lenses.				
IC	ICM C08G077-20				
NCL	52803200				
CC	63-7 (Pharmaceuticals) Section cross-reference(s): 39				

ST intraocular lens silicone rubber; siloxane intraocular  
lens refractive index

IT Rubber, silicone, biological studies

RL: PREP (Preparation)  
(prepn. of, for intraocular lenses with high  
refractive index)

IT Lenses  
(intraocular, prepn. of, with high-refractive index  
siloxanes)

IT 151206-14-3P

RL: PREP (Preparation)  
(prepn. of, for intraocular lenses with high  
refractive index)

IT 151206-14-3P

RL: PREP (Preparation)  
(prepn. of, for intraocular lenses with high  
refractive index)

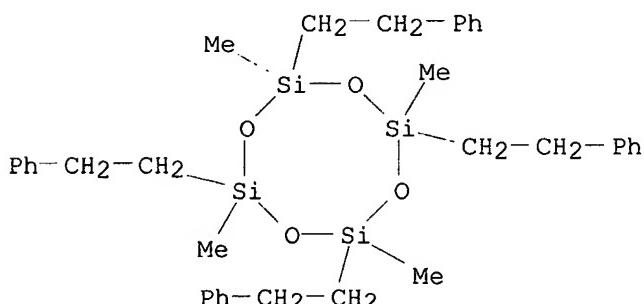
RN 151206-14-3 HCPLUS

CN Cyclotetrasiloxane, 2,4,6,8-tetramethyl-2,4,6,8-tetrakis(2-phenylethyl)-,  
polymer with 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX  
NAME)

CM 1

CRN 18817-51-1

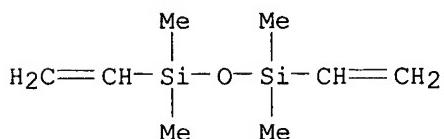
CMF C36 H48 O4 Si4



CM 2

CRN 2627-95-4

CMF C8 H18 O Si2



L61 ANSWER 23 OF 37 HCPLUS COPYRIGHT 2002 ACS

AN 1993:109800 HCPLUS

DN 118:109800

TI Composition for rigid gas permeable contact lenses

IN Chen, Richard Y. S.  
PA Optical Research Inc., USA  
SO U.S., 6 pp.  
CODEN: USXXAM

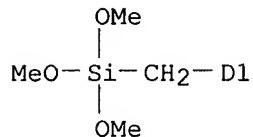
DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5162469	A	19921110	US 1991-740591	19910805
AB	A copolymer for making contact <b>lenses</b> comprises a polymerizable fluoromonomer and a polymerizable hydrolyzable silicone monomer. A polymer was prep'd. from 2,2,2-trifluoroethyl methacrylate 20.0, styrylmethyltrimethoxysilane 18.0, methacryloxypropyltris(trimethylsiloxy) silane 41.7, methacrylic acid 16.0, ethylene glycol dimethacrylate 4.0, and Vazo 52 (initiator) 0.03 g. <b>Lenses</b> from this polymer are highly transparent and have uniform optical properties. They have an O permeability of 50 DK units at 35.degree., a contact angle of <20.degree., and a refractive index of 1.47. The <b>lens</b> can correct an astigmatism to about 4.0 DO.				
IC	ICM C08F214-18				
	ICS G03B021-46				
NCL	526245000				
CC	63-7 (Pharmaceuticals)				
ST	contact <b>lens</b> fluoropolymer silicone				
IT	<b>Lenses</b> (contact, rigid gas permeable, fluoropolymer-silicones for, prepn. of)				
IT	Siloxanes and Silicones, preparation				
	RL: PREP (Preparation) (fluorine-contg., prepn. of, for rigid gas permeable contact <b>lenses</b> )				
IT	Fluoropolymers RL: PREP (Preparation) (siloxane-, prepn. of, for rigid gas permeable contact <b>lenses</b> )				
IT	78181-78-9P 146191-58-4P 146191-59-5P 146191-60-8P 146225-25-4P 146225-26-5P RL: PREP (Preparation) (prepn. of, for rigid gas permeable contact <b>lenses</b> )				
IT	146191-58-4P 146191-59-5P 146191-60-8P 146225-25-4P 146225-26-5P RL: PREP (Preparation) (prepn. of, for rigid gas permeable contact <b>lenses</b> )				
RN	146191-58-4 HCPLUS				
CN	2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), [(ethenylphenyl)methyl]trimethoxysilane, 2,2,2-trifluoroethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis(trimethylsilyl)oxy]disiloxanylpropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)				
CM	1				
CRN	78181-78-9				
CMF	C12 H18 O3 Si				
CCI	IDS				

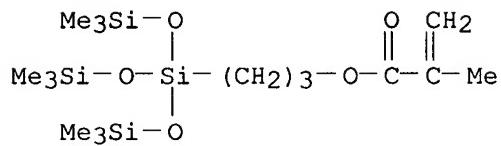


D1—CH=CH<sub>2</sub>



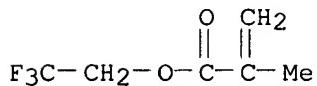
CM 2

CRN 17096-07-0  
CMF C16 H38 O5 Si4



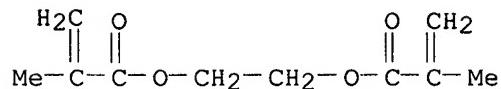
CM 3

CRN 352-87-4  
CMF C6 H7 F3 O2



CM 4

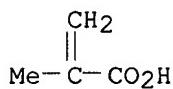
CRN 97-90-5  
CMF C10 H14 O4



CM 5

CRN 79-41-4

CMF C4 H6 O2



RN 146191-59-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), [(ethenylphenyl)methyl]trimethoxysilane, methyl 2-methyl-2-propenoate, 2,2,2-trifluoroethyl 2-methyl-2-propenoate, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

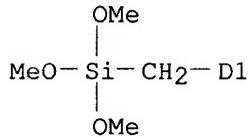
CRN 78181-78-9

CMF C12 H18 O3 Si

CCI IDS



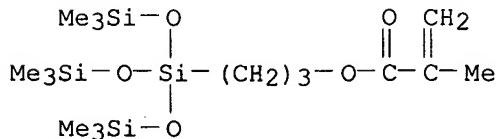
D1--CH=CH2



CM 2

CRN 17096-07-0

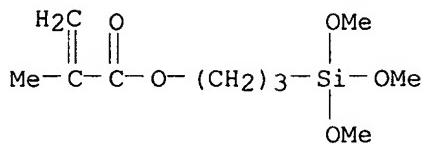
CMF C16 H38 O5 Si4



CM 3

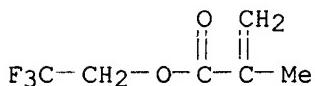
CRN 2530-85-0

CMF C10 H20 O5 Si



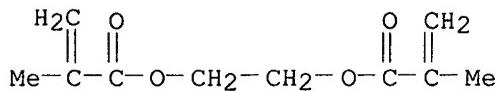
CM 4

CRN 352-87-4  
CMF C6 H7 F3 O2



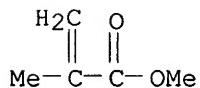
CM 5

CRN 97-90-5  
CMF C10 H14 O4



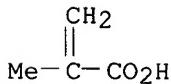
CM 6

CRN 80-62-6  
CMF C5 H8 O2



CM 7

CRN 79-41-4  
CMF C4 H6 O2



RN 146191-60-8 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), [(ethenylphenyl)methyl]trimethoxysilane, 2-hydroxypropyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and

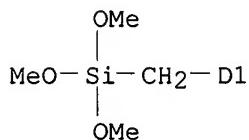
3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 78181-78-9  
CMF C12 H18 O3 Si  
CCI IDS

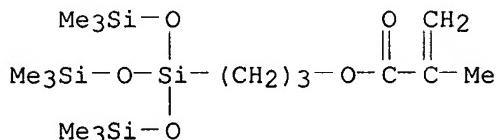


D1—CH=CH<sub>2</sub>



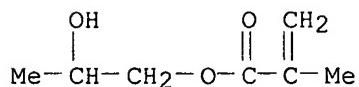
CM 2

CRN 17096-07-0  
CMF C16 H38 O5 Si4



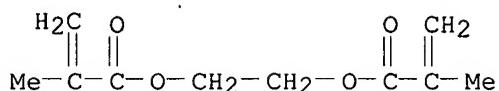
CM 3

CRN 923-26-2  
CMF C7 H12 O3

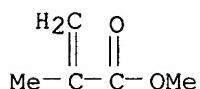


CM 4

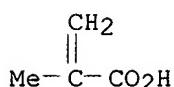
CRN 97-90-5  
CMF C10 H14 O4



CM 5

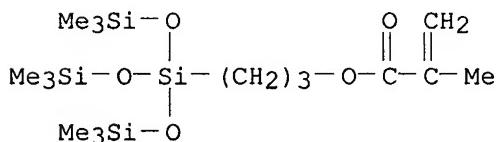
CRN 80-62-6  
CMF C5 H8 O2

CM 6

CRN 79-41-4  
CMF C4 H6 O2

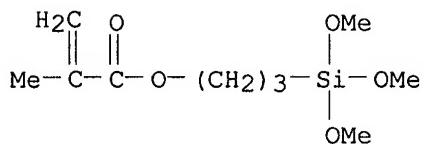
RN 146225-25-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), methyl 2-methyl-2-propenoate, 2,2,2-trifluoroethyl 2-methyl-2-propenoate, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI). (CA INDEX NAME)

CM 1

CRN 17096-07-0  
CMF C16 H38 O5 Si4

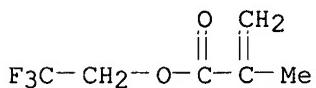
CM 2

CRN 2530-85-0  
CMF C10 H20 O5 Si



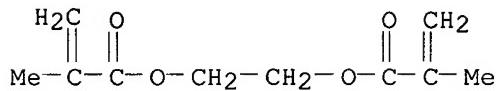
CM 3

CRN 352-87-4  
CMF C6 H7 F3 O2



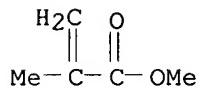
CM 4

CRN 97-90-5  
CMF C10 H14 O4



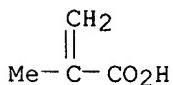
CM 5

CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 79-41-4  
CMF C4 H6 O2



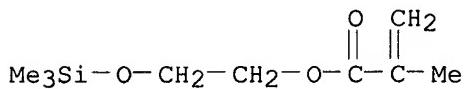
RN 146225-26-5 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 2-hydroxyethyl 2-methyl-2-propenoate, 2,2,2-trifluoroethyl 2-methyl-2-propenoate, 3-[3,3,3-trimethyl-1,1-

bis[(trimethylsilyl)oxy]disiloxanylpropyl 2-methyl-2-propenoate and  
2-[(trimethylsilyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17407-09-9

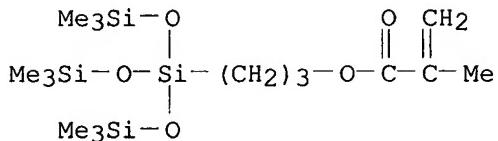
CMF C9 H18 O3 Si



CM 2

CRN 17096-07-0

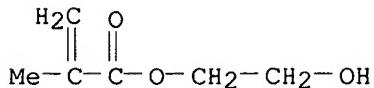
CMF C16 H38 O5 Si4



CM 3

CRN 868-77-9

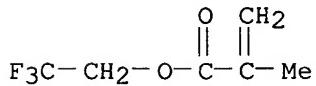
CMF C6 H10 O3



CM 4

CRN 352-87-4

CMF C6 H7 F3 O2



CM 5

CRN 97-90-5

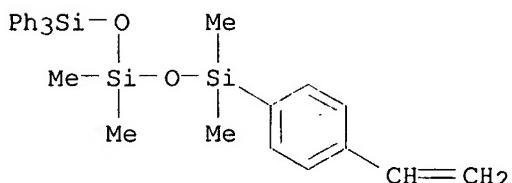
CMF C10 H14 O4



(prepns. of, for contact lenses)  
 IT 114556-29-5P 117547-75-8P 117547-76-9P  
 129088-46-6P 129088-48-8P  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP  
 (Preparation); USES (Uses)  
 (prepns. of, for contact lenses)  
 RN 114556-29-5 HCPLUS  
 CN Trisiloxane, 1-(4-ethenylphenyl)-1,1,3,3-tetramethyl-5,5-triphenyl-,  
 homopolymer (9CI) (CA INDEX NAME)

CM 1

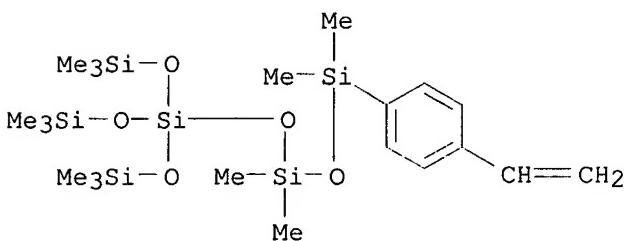
CRN 114556-28-4  
 CMF C30 H34 O2 Si3



RN 117547-75-8 HCPLUS  
 CN Tetrosiloxane, 1-(4-ethenylphenyl)-1,1,3,3,7,7-heptamethyl-5,5-  
 bis[(trimethylsilyl)oxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

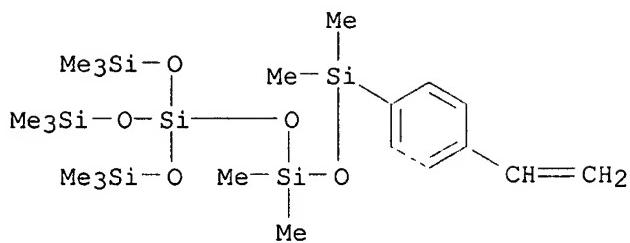
CRN 117547-74-7  
 CMF C21 H46 O5 Si6



RN 117547-76-9 HCPLUS  
 CN Tetrosiloxane, 1-(4-ethenylphenyl)-1,1,3,3,7,7-heptamethyl-5,5-  
 bis[(trimethylsilyl)oxy]-, polymer with ethenylbenzene (9CI) (CA INDEX  
 NAME)

CM 1

CRN 117547-74-7  
 CMF C21 H46 O5 Si6



CM 2

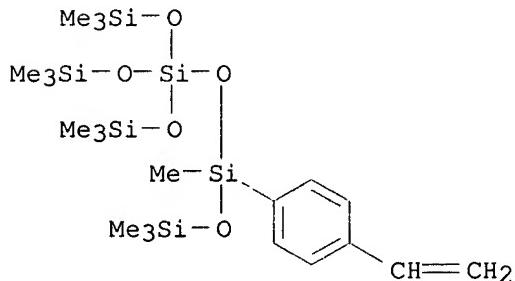
CRN 100-42-5  
CMF C8 H8

H<sub>2</sub>C=CH-Ph

RN 129088-46-6 HCPLUS  
CN Tetrilosane, 3-(4-ethenylphenyl)-1,1,1,3,7,7-heptamethyl-5,5-bis[(trimethylsilyl)oxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

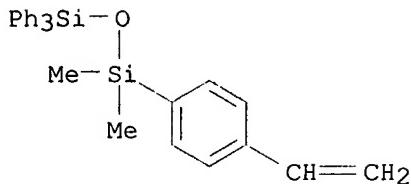
CRN 129088-45-5  
CMF C21 H46 O5 Si6



RN 129088-48-8 HCPLUS  
CN Disiloxane, 1-(4-ethenylphenyl)-1,1-dimethyl-3,3-triphenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 129088-47-7  
CMF C28 H28 O Si2



L61 ANSWER 25 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1992:598577 HCAPLUS  
 DN 117:198577  
 TI Manufacture of oxygen permeable contact lenses containing interpenetrating polymer networks  
 IN Pettigrew, Lisa; Ratkowski, Donald A.; Burke, William E.; Weinschenk, Joseph I. Iii  
 PA Pilkington Visioncare Inc., USA  
 SO Eur. Pat. Appl., 18 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 488627	A2	19920603	EP 1991-310842	19911125
	EP 488627	A3	19930217		
	EP 488627	B1	19960214		
	R: AT, CH, DE, FR, GB, IT, LI, NL				
	US 5170192	A	19921208	US 1990-619735	19901129
	AU 9188131	A1	19920604	AU 1991-88131	19911125
	AU 639159	B2	19930715		
	AT 134171	E	19960215	AT 1991-310842	19911125
	CA 2056266	AA	19920530	CA 1991-2056266	19911127
	JP 04293012	A2	19921016	JP 1991-316800	19911129
	JP 3124343	B2	20010115		
PRAI	US 1990-619735	A	19901129		
AB	An O-permeable bifocal contact lens which has a distance vision portion and a near vision portion is made from materials with different refractive indexes. A crosslinked polymer with refractive index of .ltoeq.1.49 is used for the distance portion of the lens. For the near vision portion of the lens, the refractive index is .ltoeq.1.54. The polymer systems involve interpenetrating polymer networks. Various monomers e.g., Me methacrylate, acryloyloxyalkylsilanes, vinylanisole, vinylpyrrolidone, etc., were used for the polym. and formation of interpenetrating networks. The resulting bifocal lens blank was cut to desired parameters.				
IC	ICM B29D011-00 ICS G02C007-06; G02B001-04				
CC	63-7 (Pharmaceuticals)				
ST	Section cross-reference(s): 35				
IT	polyacrylate contact lens prep; contact lens gas permeable polymer prep; interpenetrating polymer network contact lens prep; bifocal lens polymer prep				
IT	<b>Lenses</b> (contact, bifocal, interpenetrating polyacrylate networks for, prepn. of)				
IT	<b>Lenses</b> (contact, oxygen-permeable, bifocal, interpenetrating polyacrylate				

networks for, prepn. of)

IT 143606-66-0P 143606-67-1P 144145-72-2P 144145-73-3P  
 144169-00-6P 144169-01-7P  
 RL: PREP (Preparation)  
 (prepn. of, for interpenetrating polymer networks in manuf. of  
 oxygen-permeable contact lenses)

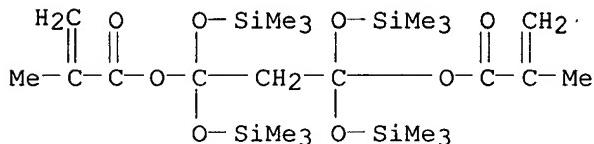
IT 144145-72-2P 144145-73-3P 144169-00-6P  
 144169-01-7P  
 RL: PREP (Preparation)  
 (prepn. of, for interpenetrating polymer networks in manuf. of  
 oxygen-permeable contact lenses)

RN 144145-72-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with  
 3-[1-hydroxy-3,3,3-trimethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl  
 2-methyl-2-propenoate, methyl 2-propenoate, 1,1,3,3-  
 tetrakis[(trimethylsilyl)oxy]-1,3-propanediyl bis(2-methyl-2-propenoate),  
 2,2,2-trifluoroethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-  
 bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

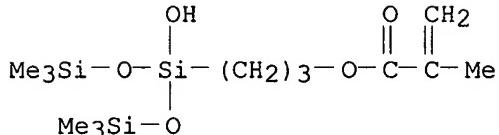
CM 1

CRN 144145-71-1  
 CMF C23 H48 O8 Si4



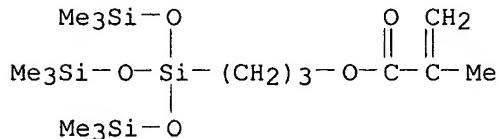
CM 2

CRN 83692-44-8  
 CMF C13 H30 O5 Si3



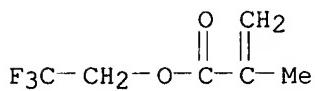
CM 3

CRN 17096-07-0  
 CMF C16 H38 O5 Si4



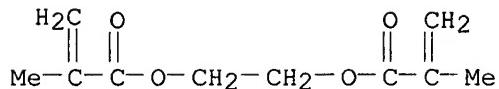
CM 4

CRN 352-87-4  
CMF C6 H7 F3 O2



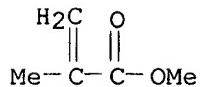
CM 5

CRN 97-90-5  
CMF C10 H14 O4



CM 6

CRN 80-62-6  
CMF C5 H8 O2

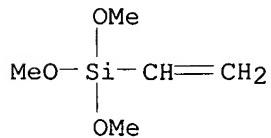


RN 144145-73-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 1-ethenyl-4-methoxybenzene, ethenyltrimethoxysilane and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

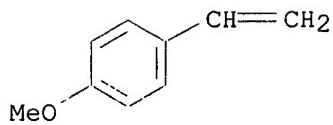
CM 1

CRN 2768-02-7  
CMF C5 H12 O3 Si



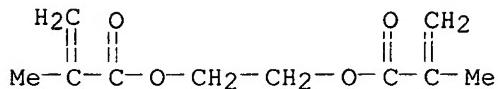
CM 2

CRN 637-69-4  
CMF C9 H10 O



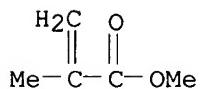
CM 3

CRN 97-90-5  
CMF C10 H14 O4



CM 4

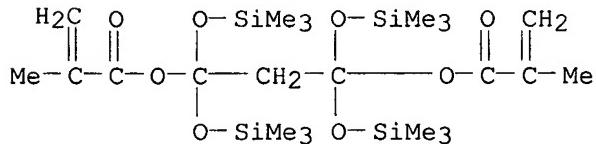
CRN 80-62-6  
CMF C5 H8 O2



RN 144169-00-6 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-[1-hydroxy-3,3,3-trimethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-propanediyl bis(2-methyl-2-propenoate), 2,2,2-trifluoroethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

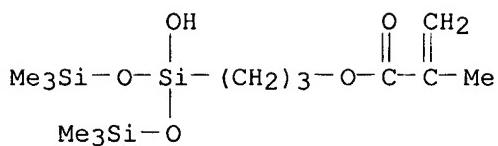
CM 1

CRN 144145-71-1  
CMF C23 H48 O8 Si4



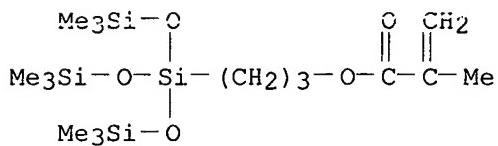
CM 2

CRN 83692-44-8  
CMF C13 H30 O5 Si3



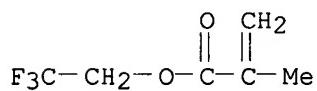
CM 3

CRN 17096-07-0  
CMF C16 H38 O5 Si4



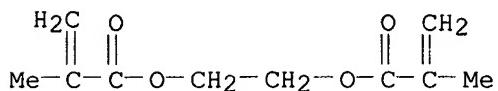
CM 4

CRN 352-87-4  
CMF C6 H7 F3 O2



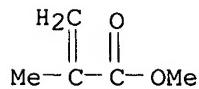
CM 5

CRN 97-90-5  
CMF C10 H14 O4



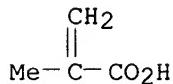
CM 6

CRN 80-62-6  
CMF C5 H8 O2



CM 7

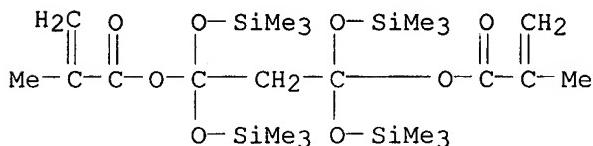
CRN 79-41-4  
 CMF C4 H6 O2



RN 144169-01-7 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with 3-[1-hydroxy-3,3,3-trimethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-propanediyl bis(2-methyl-2-propenoate), 2,2,2-trifluoroethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

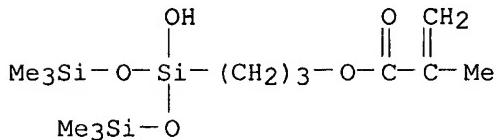
CM 1

CRN 144145-71-1  
 CMF C23 H48 O8 Si4



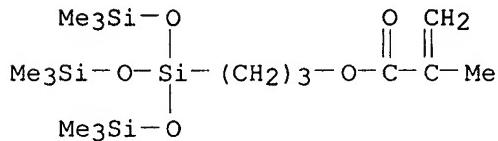
CM 2

CRN 83692-44-8  
 CMF C13 H30 O5 Si3

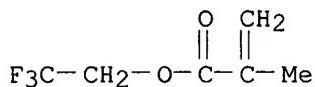


CM 3

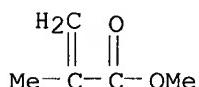
CRN 17096-07-0  
 CMF C16 H38 O5 Si4



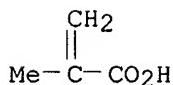
CM 4

CRN 352-87-4  
CMF C6 H7 F3 O2

CM 5

CRN 80-62-6  
CMF C5 H8 O2

CM 6

CRN 79-41-4  
CMF C4 H6 O2

L61 ANSWER 26 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1992:221626 HCPLUS  
 DN 116:221626  
 TI Manufacture of plastic lenses  
 IN Funae, Yasuaki; Yamamoto, Tetsuya; Takemura, Manabu; Matsuda, Tatsuto  
 PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03287101	A2	19911217	JP 1990-84818	19900402
AB	A plastic lens is prep'd. by polymg. monomers (Markush structures given) in the presence of silane coupling agents and/or epoxy compds. The monomers include styrene, styrene derivs., unsatd. nitriles, (meth)acrylic acid esters, allyl ethers, urethane (meth)acrylates, etc. These lenses have high refractive indexes. Thus, bis(2-methacryloylthioethyl)sulfide 50, styrene 40, and acrylonitrile 10 parts by wt. were polymd. in the presence of 20 ppm 3-methacryloyloxypropyltrimethoxysilane and 1 part glycidyl methacrylate,				

0.2 part 2,2'-azobis(2,4-dimethylisovaleronitrile), and 0.1 part lauroyl peroxide, and molded to give a lens.

IC ICM G02B001-04

ICS C08F002-02; C08F002-44; C08F020-38; C08F299-00

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 38

ST plastic lens coupling agent silane

IT Lenses

(eyeglass, manuf. of, acrylate polymers for)

IT 141312-65-4P 141313-69-1P 141313-70-4P

141313-71-5P 141313-72-6P 141313-74-8P

141313-77-1P 141328-64-5P

RL: PREP (Preparation)

(prepn. of, for plastic lens manuf.)

IT 141313-69-1P 141313-70-4P 141313-71-5P

141313-72-6P 141313-77-1P 141328-64-5P

RI: PREP (Preparation)

(prepn. of, for plastic lens manuf.)

RN 141313-69-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with

ethenylbenzene, 2-propenenitrile, S,S'-(thiodi-2,1-ethanediyl)

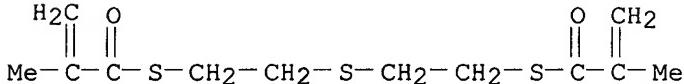
bis(2-methyl-2-propenethioate) and 3-(trimethoxysilyl)propyl

2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 117651-91-9

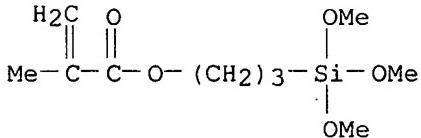
CMF C12 H18 O2 S3



CM 2

CRN 2530-85-0

CMF C10 H20 O5 Si



CM 3

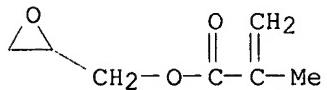
CRN 107-13-1

CMF C3 H3 N



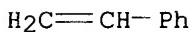
CM 4

CRN 106-91-2  
CMF C7 H10 O3



CM 5

CRN 100-42-5  
CMF C8 H8

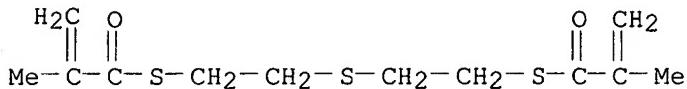


RN 141313-70-4 HCPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-2,1-ethanediyl) ester,  
polymer with (3-chloropropyl)trimethoxysilane, ethenylbenzene and  
2-propenenitrile (9CI) (CA INDEX NAME)

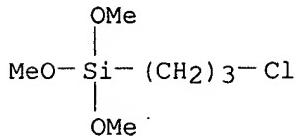
CM 1

CRN 117651-91-9  
CMF C12 H18 O2 S3



CM 2

CRN 2530-87-2  
CMF C6 H15 Cl O3 Si



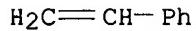
CM 3

CRN 107-13-1  
CMF C3 H3 N



CM 4

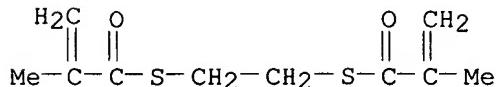
CRN 100-42-5  
CMF C8 H8



RN 141313-71-5 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with  
(3-chloropropyl)trimethoxysilane, S,S'-1,2-ethanediyl bis(2-methyl-2-  
propanethioate) and ethenylbenzene (9CI) (CA INDEX NAME)

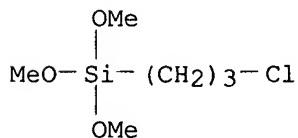
CM 1

CRN 117675-95-3  
CMF C10 H14 O2 S2



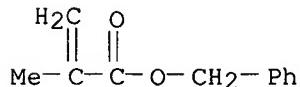
CM 2

CRN 2530-87-2  
CMF C6 H15 Cl O3 Si



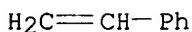
CM 3

CRN 2495-37-6  
CMF C11 H12 O2



CM 4

CRN 100-42-5  
CMF C8 H8



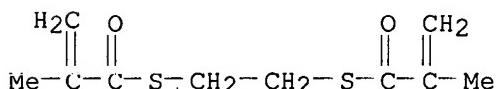
RN 141313-72-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with S,S'-1,2-ethanediyl bis(2-methyl-2-propenethioate), ethenylbenzene and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 117675-95-3

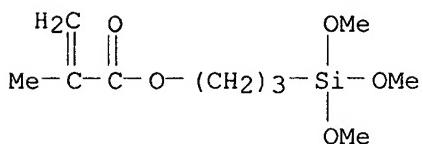
CMF C10 H14 O2 S2



CM 2

CRN 2530-85-0

CMF C10 H20 O5 Si



CM 3

CRN 107-13-1

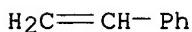
CMF C3 H3 N



CM 4

CRN 100-42-5

CMF C8 H8



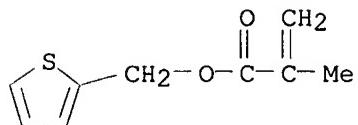
RN 141313-77-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediylloxy-2,1-ethanediyl) ester, polymer with ethenylbenzene, 2-thienylmethyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

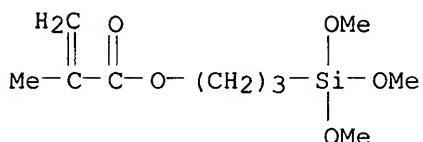
PENG 10/000136 Page 94

CRN 105581-49-5  
CMF C9 H10 O2 S



CM 2

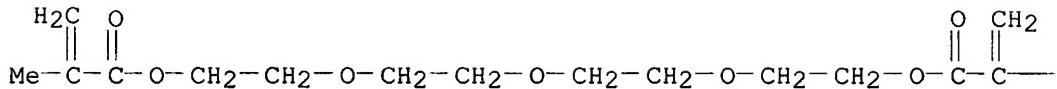
CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 3

.CRN 109-17-1  
CMF C16 H26 07

PAGE 1-A

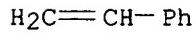


PAGE 1-B

— Me

CM 4

CRN 100-42-5  
CMF C8 H8



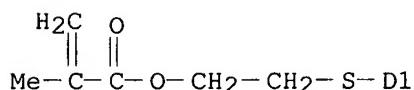
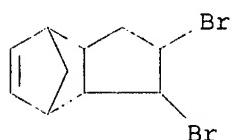
RN 141328-64-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with  
2-[(1,2-dibromo-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indenyl)thio]ethyl

2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and  
3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

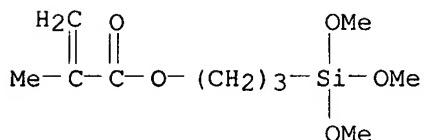
CM 1

CRN 141312-64-3  
CMF C16 H20 Br2 O2 S  
CCI IDS



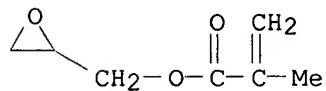
CM 2

CRN 2530-85-0  
CMF C10 H20 O5 Si



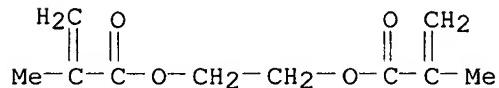
CM 3

CRN 106-91-2  
CMF C7 H10 O3



CM 4

CRN 97-90-5  
CMF C10 H14 O4



L61 ANSWER 27 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1991:614921 HCAPLUS  
 DN 115:214921  
 TI Coating compositions containing acrylate polymers and metal fluorides for plastic eyeglasses  
 IN Kawashima, Junji; Iryo, Takeaki  
 PA Seiko Epson Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03006265	A2	19910111	JP 1989-138714	19890531
	JP 2730185	B2	19980325		
AB	Active energy-curable coating compns., useful for plastic eyeglasses as well as camera lenses, optical lenses, etc., contain 10-70 wt.% (based on total solid ingredients) MgF <sub>2</sub> and/or CaF <sub>2</sub> fine granules (particle size 1-50 .mu.m) and 90-30 wt.% polymerizable org. compds. and photopolymn. initiators. Pentaerythritol tetraacrylate 3.0, trimethylolpropane triacrylate 2.0, perfluoroisopropyl methacrylate 3.0, 20% MgF <sub>2</sub> sol (particle size 10-20 .mu.m, dispersed in aq. EtOH) 40, benzoin Me ether 0.1 wt. part, and silicone surfactant were mixed in AcOEt, coated on lenses (Seiko Plax), and irradiated under high-pressure Hg lamp for 3 s. The formed membrane showed refractive index 1.405 and good dye affinity, adhesion property, and wear-, water-, and chem. resistance.				
IC	ICM C09D004-00 ICS C08J007-04; C09D004-00; G02B001-10				
ICA	G02C007-00				
CC	63-7 (Pharmaceuticals) Section cross-reference(s): 42				
ST	plastic eyeglass coating magnesium fluoride; calcium fluoride coating plastic eyeglass; photocurable coating fluoride lens				
IT	Polycarbonates, uses and miscellaneous RL: USES (Uses) (eyeglasses, coatings contg. metal fluorides and acrylate copolymers for)				
IT	Lenses (photocurable coatings contg. metal fluorides and acrylate copolymers for)				
IT	Lenses (eyeglass, photocurable coatings contg. metal fluorides and acrylate copolymers for)				
IT	9011-14-7, Poly(methyl methacrylate) 25656-90-0, Seiko Plax 92529-47-0, SEIKO Hi-Lord RL: BIOL (Biological study) (eyeglasses, coatings contg. magnesium fluoride and acrylate copolymers for)				
IT	136434-14-5P 136434-16-7P 136930-33-1P RL: PREP (Preparation) (prepn. of, coatings contg. magnesium fluoride sol and, for plastic eyeglasses)				
IT	7783-40-6, Magnesium fluoride 7789-75-5, Calcium fluoride, biological studies RL: BIOL (Biological study)				

(sol, photocurable coatings contg., with low-refractive index, for plastic eyeglasses)

IT 136434-16-7P

RL: PREP (Preparation)

(prepn. of, coatings contg. magnesium fluoride sol and, for plastic eyeglasses)

RN 136434-16-7 HCAPLUS

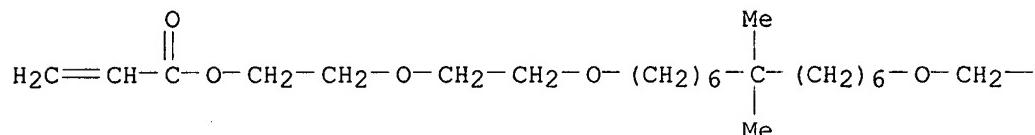
2-Propenoic acid, 2-methyl-, 1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl ester, polymer with 2,2-bis[[{(1-oxo-2-propenyl)oxy}methyl]-1,3-propanediyl di-2-propenoate, 13,13-dimethyl-3,6,20,23-tetraoxapentacosane-1,25-diyl di-2-propenoate, 2-[[3-hydroxy-2,2-bis[[{(1-oxo-2-propenyl)oxy}methyl]propoxy]methyl]-2-[[{(1-oxo-2-propenyl)oxy}methyl]-1,3-propanediyl di-2-propenoate, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[{(1-oxo-2-propenyl)oxy}methyl]propoxy]methyl]-2-[[{(1-oxo-2-propenyl)oxy}methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

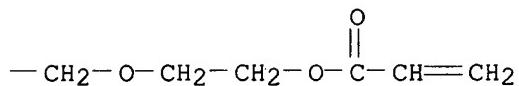
CRN 136434-15-6

CMF C29 H52 08

PAGE 1-A



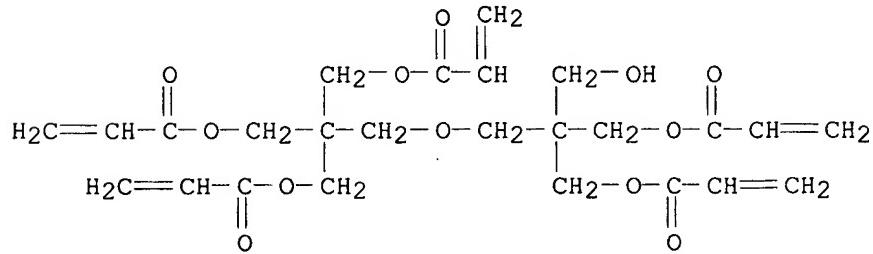
PAGE 1-B



CM 2

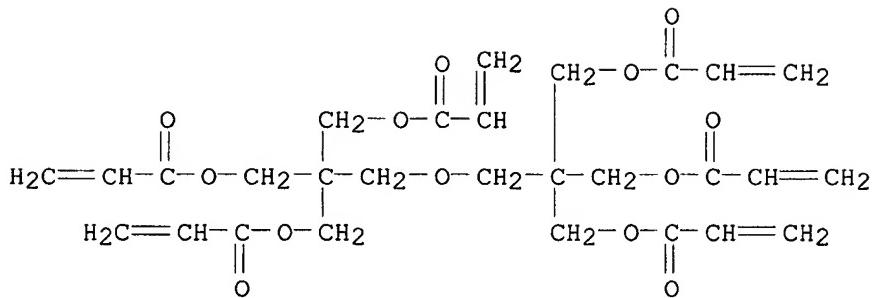
CRN 60506-81-2

CMF C25 H32 O12



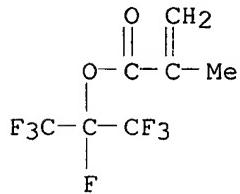
CM 3

CRN 29570-58-9  
CMF C28 H34 O13



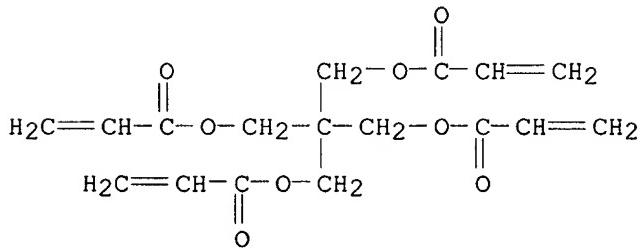
CM 4

CRN 7459-59-8  
CMF C7 H5 F7 O2



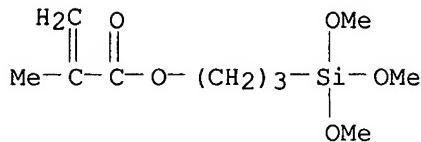
CM 5

CRN 4986-89-4  
CMF C17 H20 O8



CM 6

CRN 2530-85-0  
CMF C10 H20 O5 Si



L61 ANSWER 28 OF 37 HCPLUS COPYRIGHT 2002 ACS  
AN 1991:566702 HCPLUS  
DN 115:166702  
TI Copolymers of styrene derivatives for artificial eye lenses  
IN Kamya, Naotaka; Yanagawa, Hiroaki; Yamamoto, Yasushi; Yoshioka, Hiroshi  
PA Menicon Co., Ltd., Japan; Shin-Etsu Chemical Industry Co., Ltd.  
SO Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03122612	A2	19910524	JP 1989-261144	19891005

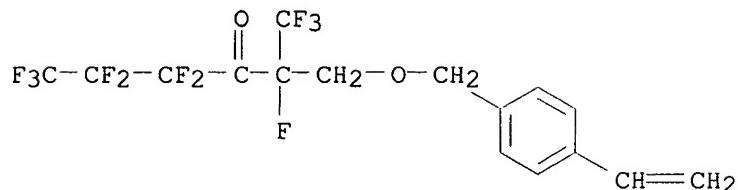
AB Lenses such as contact lens, intraocular lens, artificial cornea, etc., are prep'd. from a copolymer of Si-contg. styrene derivs. and  $\text{CH}_2:\text{CH}(\text{p-C}_6\text{H}_4)\text{CH}_2\text{OCH}_2\text{C}(\text{CF}_3)\text{F}[\text{OCF}_2\text{CF}(\text{CF}_3)]_k\text{OC}_3\text{F}_7$  where  $k = 0-4$ . The copolymer is hydrophilic, machinable, permeable to gases, mech. strong, and has a high refractive index. Thus, a copolymer was prep'd. by polymg. tris(trimethylsiloxy)silylstyrene 36, 4-vinylbenzyl-2,4,4,5,5,6,6,6-octafluoro-2-trifluoromethyl-3-oxahexyl ether 64, 4-vinylbenzyl methacrylate 4, N-vinylpyrrolidone 5.6, and methacrylic acid 4.4 parts by wt. The phys. properties of the copolymer were shown.

IC ICM G02C007-04  
ICS A61L027-00  
CC 63-7 (Pharmaceuticals)  
ST silylstyrene copolymer artificial eye lens; styrene copolymer contact lens  
IT Lenses  
(contact, manuf. of, from styrene deriv. copolymers)  
IT Eye  
(cornea, artificial, manuf. of, from styrene deriv. copolymers)  
IT Lenses  
(intraocular, manuf. of, from styrene deriv. copolymers)  
IT 136424-38-9P 136424-40-3P  
RL: PREP (Preparation)  
(prepn. of, for artificial eye lenses)  
IT 136424-38-9P 136424-40-3P  
RL: PREP (Preparation)  
(prepn. of, for artificial eye lenses)  
RN 136424-38-9 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 3-(ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, 2-[[[(4-ethenylphenyl)methoxy]methyl]-1,1,1,2,4,4,5,5,6,6,6-undecafluoro-3-hexanone, (4-ethenylphenyl)methyl 2-methyl-2-propenoate and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

PENG 10/000136 Page 100

CRN 136424-37-8  
CMF C16 H11 F11 O2

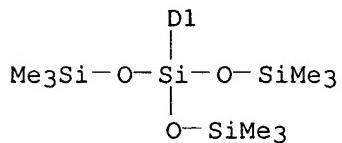


CM 2

CRN 129735-06-4  
CMF C17 H34 O3 Si4  
CCI IDS

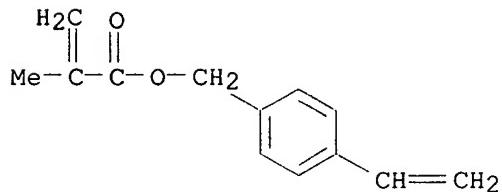


$$D_1 - \text{CH} = \text{CH}_2$$



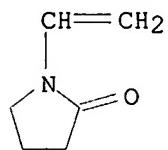
CM 3

CRN 99413-45-3  
CMF C13 H14 O2



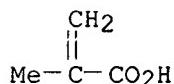
CM 4

CRN 88-12-0  
CMF C6 H9 N O



CM 5

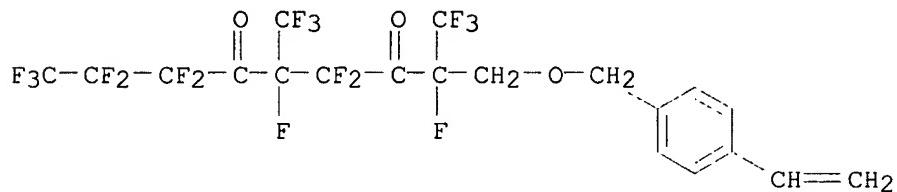
CRN 79-41-4  
CMF C4 H6 O2



RN 136424-40-3 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 3-(ethenylphenyl)-1,1,1,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, 2-[(4-ethenylphenyl)methoxy]methyl-1,1,2,4,4,5,7,7,8,8,9,9-tetradecafluoro-5-(trifluoromethyl)-3,6-nonanedione, (4-ethenylphenyl)methyl 2-methyl-2-propenoate and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

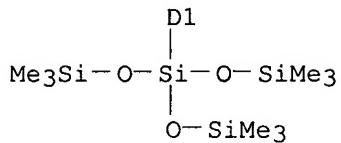
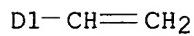
CM 1

CRN 136424-39-0  
CMF C20 H11 F17 O3



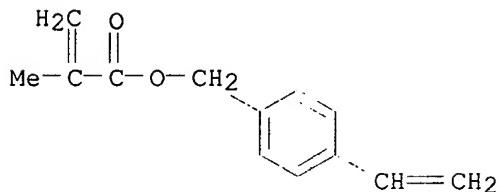
CM 2

CRN 129735-06-4  
CMF C17 H34 O3 Si4  
CCI IDS



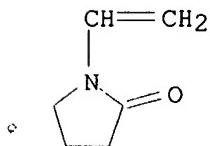
CM 3

CRN 99413-45-3  
CMF C13 H14 O2



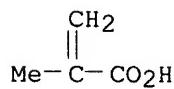
CM 4

CRN 88-12-0  
CMF C6 H9 N O



CM 5

CRN 79-41-4  
CMF C4 H6 O2



L61 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1991:457227 HCAPLUS  
 DN 115:57227  
 TI Vinylbenzyl (meth)acrylate as crosslinking agent for copolymers for ocular lens material  
 IN Yanagawa, Hiroaki; Kamiya, Naotaka  
 PA Menicon Co., Ltd., Japan  
 SO Eur. Pat. Appl., 13 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 381005	A2	19900808	EP 1990-101243	19900122
	EP 381005	A3	19920226		
	EP 381005	B1	19950111		
	R: DE, FR, GB				
	JP 02196809	A2	19900803	JP 1989-16620	19890126
	JP 2515010	B2	19960710		
	US 5041511	A	19910820	US 1990-462547	19900109
	CA 2007771	AA	19900726	CA 1990-2007771	19900115
	CA 2007771	C	19971007		
	AU 9047962	A1	19900809	AU 1990-47962	19900115
	AU 603960	B2	19901129		
PRAI	JP 1989-16620		19890126		
OS	MARPAT	115:57227			
AB	Vinylbenzyl (meth)acrylate, $\text{CH}_2:\text{C}(\text{R}1)\text{COOCH}_2\text{C}_6\text{H}_4\text{CH}:\text{CH}_2$ ( $\text{R}1 = \text{H, Me}$ ), is a crosslinking agent for prep. contact lens copolymers contg. styrene and (meth)acrylic monomers. Preferably, the monomers are Si-contg. styrenes and F-contg. (meth)acrylates. A copolymer was made using 2,2,2,2',2',2'-hexafluoroisopropyl methacrylate 17, methacrylic acid 4.8, tris(trimethylsiloxy)silylstyrene 83, N-vinylpyrrolidone 6.2, 4-vinylbenzyl methacrylate 6, and azobisisdimethylvaleronitrile 0.3 parts. The rod-shaped product was transparent with no distortion, and had a high refractive index and excellent mech. strength, hardness, and O <sub>2</sub> permeability.				
IC	ICM G02B001-04				
	ICS C08F246-00				
CC	63-7 (Pharmaceuticals)				
	Section cross-reference(s): 35				
ST	contact lens vinylbenzyl acrylate crosslinker; methacrylate vinylbenzyl crosslinker contact lens				
IT	Crosslinking agents (vinylbenzyl (meth)acrylates, for prep. acrylate-styrene copolymers for contact lenses)				
IT	Lenses (contact, vinylbenzyl (meth)acrylate crosslinking agents for copolymers for)				
IT	Lenses (contact, hard, oxygen-permeable, vinylbenzyl (meth)acrylate crosslinking agents for copolymers for)				
IT	114573-55-6 134874-54-7 RL: BIOL (Biological study) (as crosslinking agent for acrylate- and methacrylate-styrene copolymers for contact lenses)				
IT	99413-45-3P RL: PREP (Preparation) (prepn. of, as crosslinking agent for acrylate-styrene copolymers for)				

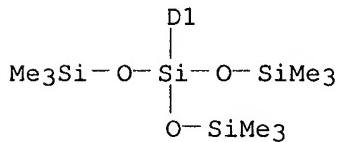
contact lenses)  
IT 129735-07-5P 134874-52-5P 134874-53-6P  
RL: THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(prepn. of, for contact lenses)  
IT 129735-07-5P 134874-52-5P 134874-53-6P  
RL: THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(prepn. of, for contact lenses)  
RN 129735-07-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 3-(ethenylphenyl)-1,1,1,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 129735-06-4  
CMF C17 H34 O3 Si4  
CCI IDS

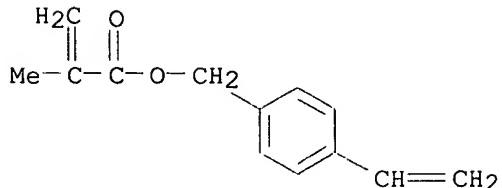


D1-CH=CH<sub>2</sub>



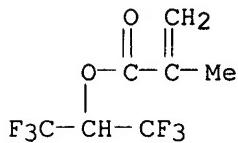
CM 2

CRN 99413-45-3  
CMF C13 H14 O2



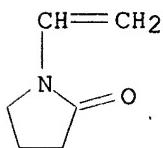
CM 3

CRN 3063-94-3  
CMF C7 H6 F6 O2



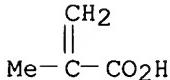
CM 4

CRN 88-12-0  
CMF C6 H9 N O



CM 5

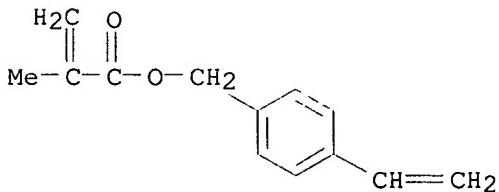
CRN 79-41-4  
CMF C4 H6 O2



RN 134874-52-5 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with (4-ethenylphenyl)methyl 2-methyl-2-propenoate, (ethenylphenyl)trimethylsilane, 1-ethenyl-2-pyrrolidinone and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 99413-45-3  
CMF C13 H14 O2



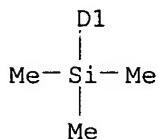
CM 2

PENG 10/000136 Page 106

CRN 97822-60-1  
CMF C11 H16 Si  
CCI IDS

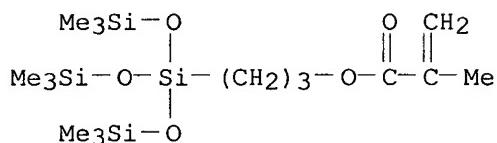


D1—CH=CH<sub>2</sub>



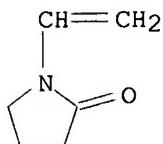
CM 3

CRN 17096-07-0  
CMF C16 H38 O5 Si4



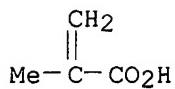
CM 4

CRN 88-12-0  
CMF C6 H9 N O



CM 5

CRN 79-41-4  
CMF C4 H6 O2



RN 134874-53-6 HCPLUS

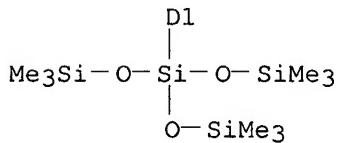
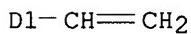
CN 2-Propenoic acid, 2-methyl-, polymer with 3-(ethenylphenyl)-1,1,1,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, 1-ethenyl-2-pyrrolidinone, methyl 2-methyl-2-propenoate, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 129735-06-4

CMF C17 H34 O3 Si4

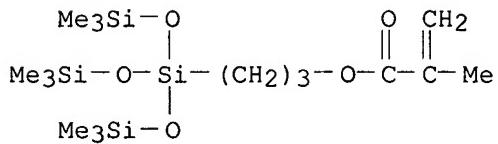
CCI IDS



CM 2

CRN 17096-07-0

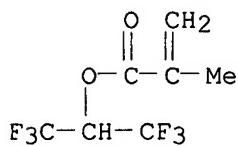
CMF C16 H38 O5 Si4



CM 3

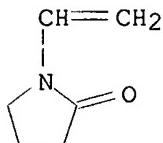
CRN 3063-94-3

CMF C7 H6 F6 O2



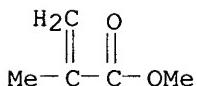
CM 4

CRN 88-12-0  
CMF C6 H9 N O



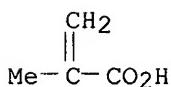
CM 5

CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 79-41-4  
CMF C4 H6 O2



L61 ANSWER 30 OF 37 HCPLUS COPYRIGHT 2002 ACS  
AN 1991:254062 HCPLUS  
DN 114:254062  
TI Preparation of vinyl carbonate and vinyl carbamate copolymers for contact lenses  
IN Bambury, Ronald E.; Seelye, David E.  
PA Bausch and Lomb Inc., USA  
SO Eur. Pat. Appl., 36 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	EP 396364	A2	19901107	EP 1990-304659	19900430
	EP 396364	A3	19911127		
	EP 396364	B1	19970611		
	R: DE, ES, FR, GB, IT, SE				
	US 5070215	A	19911203	US 1989-346204	19890502
	CA 2014210	AA	19901102	CA 1990-2014210	19900409
	JP 03072506	A2	19910327	JP 1990-110664	19900427
	JP 3274681	B2	20020415		
	EP 757033	A2	19970205	EP 1996-202972	19900430
	EP 757033	A3	19970305		
	EP 757033	B1	19990303		
	R: DE, ES, FR, GB, IT, SE				
	ES 2104583	T3	19971016	ES 1990-304659	19900430
	ES 2131907	T3	19990801	ES 1996-202972	19900430
	AU 9054616	A1	19901108	AU 1990-54616	19900501
	AU 645749	B2	19940127		
	BR 9002045	A	19910813	BR 1990-2045	19900502
	US 5610252	A	19970311	US 1995-450510	19950525
	US 6166236	A	20001226	US 1997-784637	19970121
PRAI	US 1989-346204	A	19890502		
	EP 1990-304659	A3	19900430		
	US 1991-724091	A3	19910719		
	US 1995-450510	A3	19950525		
AB	Vinyl carbonate and vinyl carbamate monomers (Markush given) are prepd. and are used to produce copolymers useful as hydrogel, soft nonhydrogel, and/or rigid gas-permeable contact lens materials. Thus, 3-aminopropyl(trimethylsiloxy)silane was reacted with vinyl chloroformate to form 3-[tris(trimethylsiloxy)silyl]propyl vinyl carbamate, which was copolymerd. in different ratios with N-vinylpyrrolideneone and 1,5-bis(vinyloxycarboxyloxy)-2,2,3,3,4,4-hexachloropentane to form soft hydrogel copolymer. Tensile strength, O permeability, refractive index, and other properties of the hydrogel polymers were detd. Synthesis of many monomers and crosslinkers is included.				
IC	ICM C08F218-00 ICS G02B001-04; C07C271-08; C07C069-00; C07D207-404; C07D207-27				
CC	63-7 (Pharmaceuticals) Section cross-reference(s): 23, 24, 25, 27, 28, 35				
ST	vinyl carbonate prepn contact lens; carbamate vinyl prepn contact lens; contact lens vinyl copolymer				
IT	Polycarbonates, biological studies RL: BIOL (Biological study) (Me vinyl siloxane-, hard contact lens from)				
IT	Siloxanes and Silicones, biological studies RL: BIOL (Biological study) (Me vinyl, polycarbonate-, hard contact lens from)				
IT	Lenses (contact, hard, vinyl carbonate and vinyl carbamate copolymers for)				
IT	Siloxanes and Silicones, preparation RL: PREP (Preparation) (vinyl group-terminated, prepn. of, as monomer for contact lens copolymer)				
IT	40965-80-8P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prep. and reaction of, in monomer prepn. for contact lens copolymer)				
IT	72978-28-0P 134073-16-8P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)				

(prep. and reaction of, in prep. of contact lens copolymer)  
IT 134027-40-0P 134073-06-6P 134073-17-9P 134073-18-0P 134073-19-1P  
134073-20-4P 134073-21-5P 134073-22-6P 134073-23-7P 134073-24-8P  
134096-37-0P  
RL: PREP (Preparation)  
(prep. of, as crosslinker for contact lens copolymer)  
IT 57933-88-7P 57933-92-3P 96383-58-3P 119448-07-6P 134072-84-7P  
134072-85-8P 134072-86-9P 134072-87-0P 134072-88-1P 134072-89-2P  
134072-90-5P 134072-91-6P 134072-92-7P 134072-93-8P 134072-94-9P  
134072-95-0P 134072-96-1P 134072-97-2P 134072-99-4P 134073-00-0P  
134073-02-2P 134073-03-3P 134073-04-4P 134073-05-5P 134073-06-6P  
134073-09-9P 134073-10-2P 134073-11-3P 134073-12-4P 134073-13-5P  
134073-14-6P 134073-15-7P 134073-25-9P, 1,2,3-  
Tris(vinyloxycarbonyloxy)propane 134073-26-0P  
RL: PREP (Preparation)  
(prep. of, as monomer for contact lens copolymer)  
IT 88-12-0DP, polymers with vinyl-terminated siloxanes and hexafluoropentane  
divinylcarbonate and vinylpyrrolidinone 134072-97-2DP, polymers with  
vinyl-terminated siloxanes and bis(vinyloxycarbonyloxy)propane and  
vinylpyrrolidinone 134073-00-0DP, polymers with vinyl-terminated  
siloxanes and bis(vinyloxycarbonyloxy)hexafluoropropyl vinyl carbonate and  
vinylpyrrolidinone 134073-02-2DP, polymers with vinyl-terminated  
siloxanes and tris(trimethylsiloxy)propyl vinyl carbonate and  
bis(vinyloxycarbonyloxy)propane 134073-20-4DP, polymers with  
vinyl-terminated siloxanes and [tris(trimethylsiloxy)silyl]propyl vinyl  
carbonate and vinylpyrrolidinone 134073-24-8DP, polymers with  
vinyl-terminated siloxanes and [tris(trimethylsiloxy)silyl]propyl vinyl  
carbonate and vinylpyrrolidinone 134119-45-2P  
134119-46-3P 134119-47-4P 134119-48-5P  
134119-49-6P  
RL: THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(prep. of, for contact lens)  
IT 134073-08-8P  
RL: PREP (Preparation)  
(prep. of, for monomer for contact lens copolymer)  
IT 107-19-7, Propargyl alcohol 112-27-6, Triethylene glycol 124-09-4,  
1,6-Diaminohexane, reactions 126-30-7, 2,2-Dimethyl-1,3-propanediol  
141-43-5, Aminoethanol, reactions 373-44-4, 1,8-Diaminoctane  
376-90-9, 2,2,3,3,4,4-Hexafluoro-1,5-pentanediol 25322-68-3,  
Poly(ethylene glycol) 25322-69-4, Polypropylene glycol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in crosslinker prep. for contact lens  
copolymer)  
IT 109-89-7, Diethylamine, reactions 540-51-2, 2-Bromoethanol 4801-27-8,  
2-Bromoethyl chloroformate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in intermediate prep. for contact lens  
copolymer)  
IT 56-81-5, Glycerol, reactions 75-89-8, 2,2,2-Trifluoroethanol 98-52-2,  
4-t-Butylcyclohexanol 99-71-8 110-85-0, Piperazine, reactions  
115-77-5, Pentaerythritol, reactions 124-40-3, Dimethylamine, reactions  
141-43-5, Ethanolamine, reactions 340-04-5, 1-Phenyl-2,2,2-  
trifluoroethanol 373-88-6, 2,2,2-Trifluoroethylamine hydrochloride  
556-67-2, Octamethylcyclotetrasiloxane 768-94-5,  
Tricyclo[3.3.1.13,7]decan-1-amine 768-95-6, 1-Adamantanol 769-92-6  
770-71-8, Tricyclo[3.3.1.13,7]decane-1-methanol 920-66-1,  
1,1,1,3,3,3-Hexafluoro-2-propanol 999-97-3, Hexamethyldisilazane  
2374-14-3 2754-27-0, Trimethylsilyl acetate 2916-68-9 2917-47-7,  
Trimethylsilyl-3-propanol 2937-50-0, Allyl chloroformate 3069-25-8

3219-63-4, Trimethylsilylmethanol 3445-11-2 5931-17-9 6066-82-6,  
 N-Hydroxysuccinimide 6240-11-5, Tricyclo[3.3.1.13,7]decane-1-ethanol  
 7328-91-8, 2,2-Dimethyl-1,3-diaminopropane 13074-39-0,  
 Tricyclo[3.3.1.13,7]decan-2-amine 18077-31-1, 3-  
 Chloropropyltris(trimethylsiloxy)silane 18190-44-8, N-(2-  
 Hydroxyethyl)succinimide 25357-81-7 62012-15-1 72978-28-0  
 102229-10-7 103542-02-5 134072-85-8 134072-98-3 134073-01-1  
 134073-07-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in monomer prepn. for contact lens copolymer)

IT 5130-24-5, Vinyl chloroformate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with ethylene glycol in monomer prepn. for contact lens copolymer)

IT 107-21-1, Ethylene glycol, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with vinyl chloroformate in monomer prepn. for contact lens copolymer)

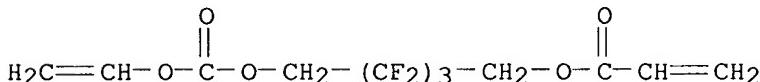
IT 134119-45-2P 134119-46-3P 134119-47-4P  
 134119-48-5P 134119-49-6P  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP  
 (Preparation); USES (Uses)  
 (prepn. of, for contact lens)

RN 134119-45-2 HCAPLUS

CN 2-Propenoic acid, 5-[(ethoxy)carbonyloxy]-2,2,3,3,4,4-hexafluoropentyl ester, polymer with 1-ethenyl-2-pyrrolidinone and ethenyl [3-[3,3,3-trimethyl-1,1-bis(trimethylsilyloxy)disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

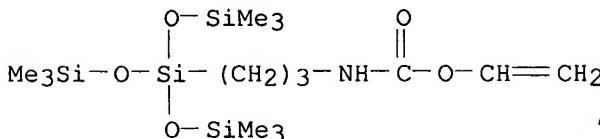
CM 1

CRN 134119-44-1  
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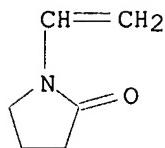
CM 2

CRN 134072-99-4  
 CMF C15 H37 N O5 Si4



CM 3

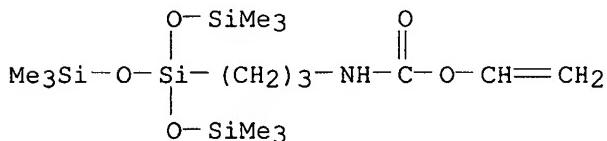
CRN 88-12-0  
 CMF C6 H9 N O



RN 134119-46-3 HCAPLUS  
CN Carbonic acid, ethenyl 2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with ethenyl [3-[3,3,3-trimethyl-1,1-bis(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

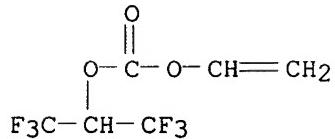
CM 1

CRN 134072-99-4  
CMF C15 H37 N O5 Si4



CM 2

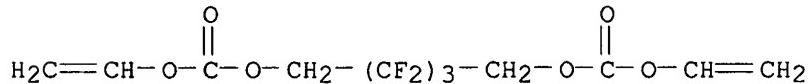
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CMF C6 H4 F6 O3



RN 134119-47-4 HCAPLUS  
CN Carbonic acid, 2,2,3,3,4,4-hexafluoro-1,5-pentanediyi diethenyl ester, polymer with ethenyl [3-[3,3,3-trimethyl-1,1-bis(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

CM 1

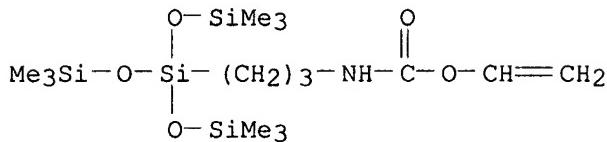
CRN 134073-24-8  
CMF C11 H10 F6 O6



CM 2

CRN 134072-99-4

CMF C15 H37 N O5 Si4



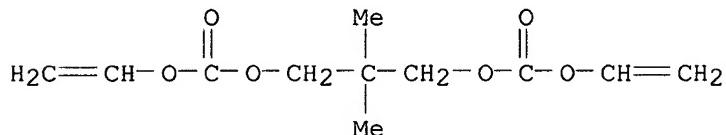
RN 134119-48-5 HCAPLUS

CN Carbonic acid, 2,2-dimethyl-1,3-propanediyl diethenyl ester, polymer with ethenyl [3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

CM 1

CRN 134073-20-4

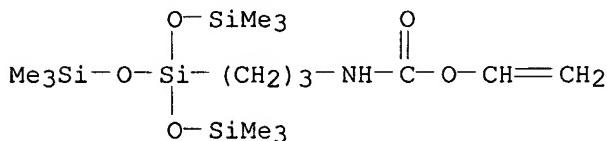
CMF C11 H16 06



CM 2

CRN 134072-99-4

CME C15 H37 N 05 Si4



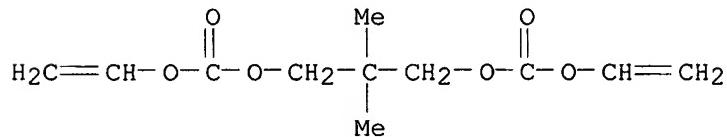
RN 134119-49-6 HCAPLUS

CN Carbonic acid, 2,2-dimethyl-1,3-propanediyl diethenyl ester, polymer with 1-ethenyl-2-pyrrolidinone and ethenyl [3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

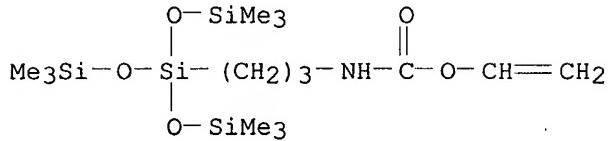
CM 1

CRN 134073-20-4

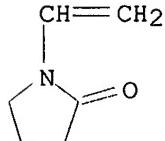
CMF C11 H16 06



CM 2

CRN 134072-99-4  
CMF C15 H37 N O5 Si4

CM 3

CRN 88-12-0  
CMF C6 H9 N O

L61 ANSWER 31 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1988:11269 HCAPLUS  
 DN 108:11269  
 TI Improved fluorine-containing itaconate siloxane polymeric compositions useful in contact lenses  
 IN Ellis, Edward J.; Ellis, Jeanne Y.  
 PA Polymer Technology Corp., USA  
 SO Eur. Pat. Appl., 63 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 219312	A2	19870422	EP 1986-307795	19861009
	EP 219312	A3	19880120		
	EP 219312	B1	19951220		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4686267	A	19870811	US 1985-786846	19851011
	IL 80018	A1	19910512	IL 1986-80018	19860912
	CA 1255425	A1	19890606	CA 1986-518411	19860917
	JP 62092914	A2	19870428	JP 1986-237804	19861006
	JP 02045166	B4	19901008		
	AU 8663620	A1	19870416	AU 1986-63620	19861007
	AU 602659	B2	19901025		
	BR 8604883	A	19870707	BR 1986-4883	19861007
	AT 131938	E	19960115	AT 1986-307795	19861009
	US 4996275	A	19910226	US 1989-449565	19891212
PRAI	US 1985-786846		19851011		
	US 1987-46132		19870504		

US 1988-270796 19881110  
AB Oxygen permeable dimensionally stable hydrophilic contact lens are prep'd. by free radical polymn. of 5-60 wt.% fluorine-contg. H<sub>2</sub>C:C(CO<sub>2</sub>Z<sub>2</sub>)CH<sub>2</sub>CO<sub>2</sub>Z<sub>1</sub> [I; one of Z<sub>1</sub>, Z<sub>2</sub> contains F; Z<sub>1</sub>, Z<sub>2</sub> = H, (fluoro)alkyl, (fluoro)aralkyl, (fluoro)phenyl, polyethers], and 40-95 wt.% ethylenically unsatd. organosiloxane. HOCH(CF<sub>3</sub>)<sub>2</sub> reacted with itaconic acid to give I [Z<sub>1</sub> = Z<sub>2</sub> = CH(CF<sub>3</sub>)<sub>2</sub>], (II) which (20 parts) was copolymd. with Me methacrylate (12.5) (III), tris(trimethylsiloxy)silylpropyl methacrylate (42) (IV), 1,3-bis(methacryloxypropyl)-1,1,3,3-tetrakis(trimethylsiloxy)disiloxane (13) (V), methacrylic acid (7.5) (VI), tetraethylene glycol dimethacrylate (5) (VII), 2,2'-azobisisobutyronitrile (0.18) and 2,2'-azobisisovaleronitrile (0.06 parts) at 40.degree. for 3 days and 65.degree. for 2 days. The copolymer is irradiated with 3.0 Mrads .gamma. radiation. The material is clear, wettable, and has a Rockwell hardness of 117-118. Lathe cut contact lenses have an O<sub>2</sub> permeability of DK55 and a refractive index of 1.44 at 21.degree.. The lens are dimensionally stable, transparent, and exhibit good resistance to protein and lipid deposits.  
IC ICM G02B001-04  
CC ICS C08F230-08; C08F222-18  
CC 63-7 (Pharmaceuticals)  
ST Section cross-reference(s): 37, 38  
ST contact lens itaconate fluorocarbon oxygen permeable; biocompatibility fluorocarbon itaconate contact lens  
IT Proteins, biological studies  
RL: BIOL (Biological study)  
(deposit of, on contact lenses, fluorine-contg. itaconate siloxane polymers to avoid)  
IT Siloxanes and Silicones, biological studies  
RL: BIOL (Biological study)  
(polymers contg. fluorocarbon itaconates and, for oxygen permeable hard contact lenses)  
IT Lenses  
(contact, contg. fluorocarbons, itaconates, and siloxanes, oxygen permeability and protein deposition resistance of)  
IT 920-66-1, 1,1,1,3,3,3-Hexafluoro-2-propanol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, with itaconic acid, for use in contact lenses)  
IT 79-10-7D, esters 79-41-4D, esters 97-65-4D, esters  
RL: BIOL (Biological study)  
(hardness modifying agent, for siloxane fluorocarbon contact lens)  
IT 7782-41-4D, itaconate esters contg.  
RL: BIOL (Biological study)  
(oxygen permeable hard contact lenses contg.)  
IT 7782-44-7, biological studies  
RL: PRP (Properties)  
(permeability of, in contact lenses of fluorine-contg. itaconate siloxane polymers)  
IT 17096-07-0 80722-63-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. of, for oxygen permeable dimensionally stable hydrophilic contact lenses)  
IT 111866-16-1P 111866-17-2P 111866-18-3P  
111876-65-4P 111876-66-5P  
RL: PREP (Preparation)  
(prepn. of, for use in oxygen permeable dimensionally stable hydrophilic contact lens)  
IT 98452-82-5P

RL: PREP (Preparation)

(prepn., polymn., and use of, in oxygen permeable contact lenses)

IT 111866-16-1P 111866-17-2P 111866-18-3P

111876-65-4P 111876-66-5P

**PREP (Preparation)**  
(prep. of, for use in oxygen permeable dimensionally stable hydrophilic contact lens)

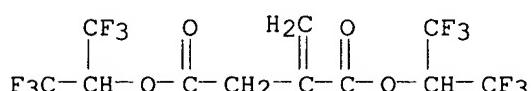
BN 111866-16-1 HCABRIUS

RN 111866-16-1 HCAPLUS  
CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediyl)bis(2-methyl-2-propenoate), [1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 98452-82-5

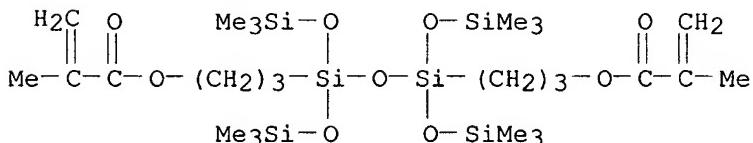
CRR 50432 02 5  
CME C11 H6 E12 04



CM 2

CRN 80722-63-0

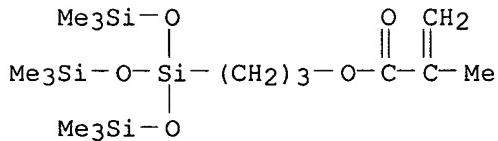
CMF C26 H58 O9 Si6



CM 3

CRN 17096-07-0

CMF C16 H38 O5 Si4

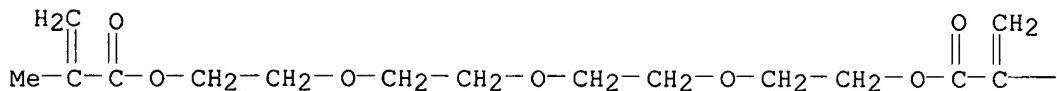


CM 4

CRN 109-17-1

CMF C16 H26 O7

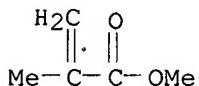
PAGE 1-A



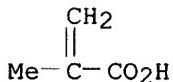
PAGE 1-B

— Me

CM 5

CRN 80-62-6  
CMF C5 H8 O2

CM 6

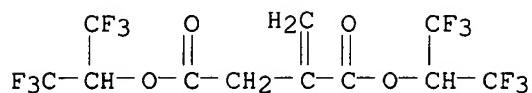
CRN 79-41-4  
CMF C4 H6 O2

RN 111866-17-2 HCPLUS

CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediyl)oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), [1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

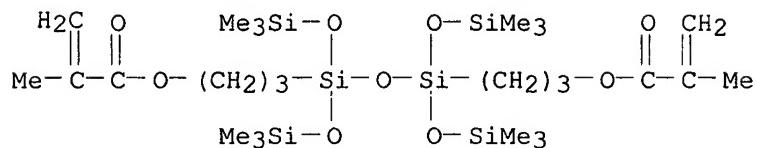
CM 1

CRN 98452-82-5  
CMF C11 H6 F12 O4



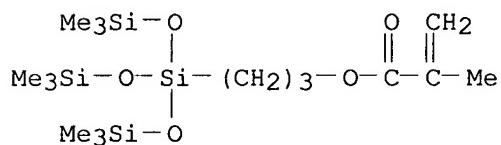
CM 2

CRN 80722-63-0  
CMF C26 H58 O9 Si6



CM 3

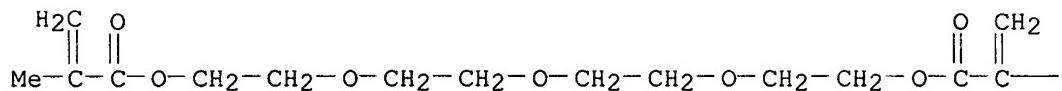
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CMF C16 H38 O5 Si4



CM 4

CRN 109-17-1  
CMF C16 H26 O7

PAGE 1-A



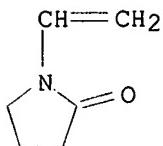
PAGE 1-B

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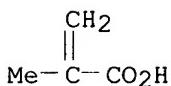
CM 5

CRN 88-12-0

CMF C6 H9 N O



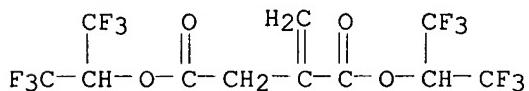
CM 6

CRN 79-41-4  
CMF C4 H6 O2

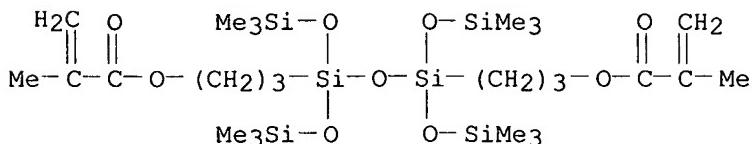
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CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with ethenylbenzene, 2-naphthalenyl 2-methyl-2-propenoate, oxybis(2,1-ethanediylxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), [1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 98452-82-5  
CMF C11 H6 F12 O4

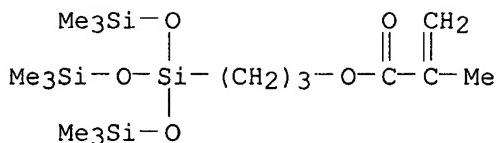
CM 2

CRN 80722-63-0  
CMF C26 H58 O9 Si6

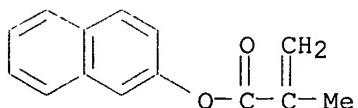
CM 3

CRN 17096-07-0

CMF C16 H38 O5 Si4



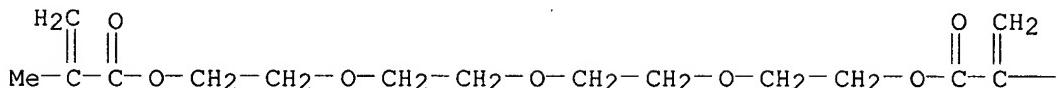
CM 4

CRN 10475-46-4  
CMF C14 H12 O2

CM 5

CRN 109-17-1  
CMF C16 H26 O7

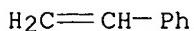
PAGE 1-A



PAGE 1-B

— Me

CM 6

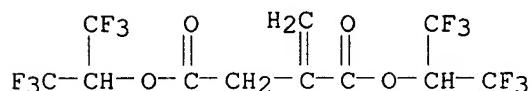
CRN 100-42-5  
CMF C8 H8

RN 111876-65-4 HCPLUS  
 CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with 1-ethenyl-2-pyrrolidinone, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediyoxy-2,1-ethanediyl) bis(2-methyl-2-propenoate),

[1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediy]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

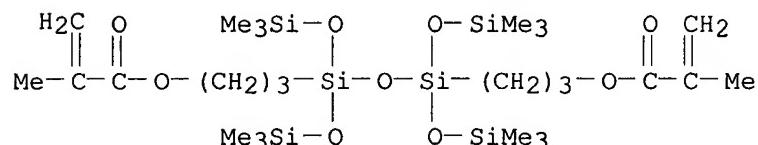
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CRN 98452-82-5  
CMF C11 H6 F12 04



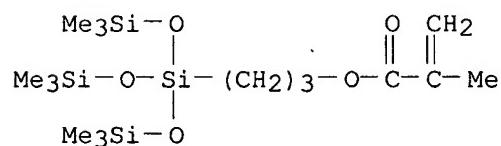
CM 2

CRN 80722-63-0  
CMF C26 H58 09 Si6



CM 3

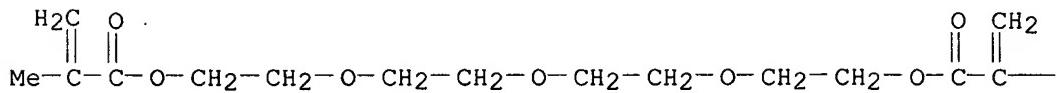
CRN 17096-07-0  
CMF C16 H38 O5 Si4



CM 4

CRN 109-17-1  
CMF C16 H26 O7

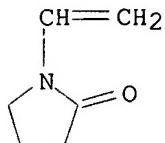
PAGE 1-A



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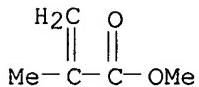
CM 5

CRN 88-12-0  
CMF C6 H9 N O



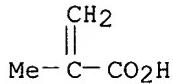
CM 6

CRN 80-62-6  
CMF C5 H8 O2



CM 7

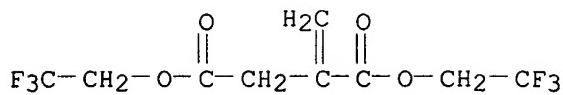
CRN 79-41-4  
CMF C4 H6 O2



RN 111876-66-5 HCPLUS  
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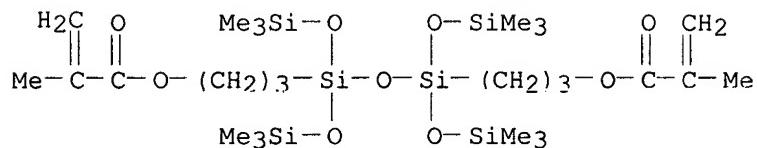
CM 1

CRN 104534-96-5  
CMF C9 H8 F6 O4



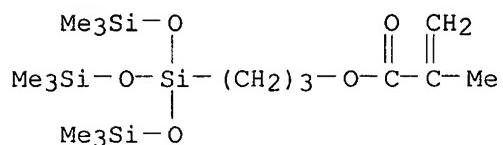
CM 2

CRN 80722-63-0  
CMF C26 H58 O9 Si6



CM 3

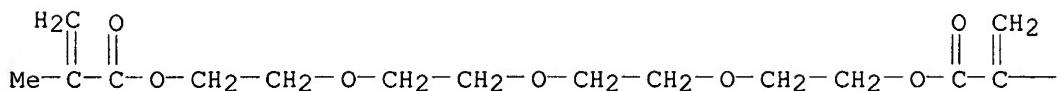
CRN 17096-07-0  
CMF C16 H38 O5 Si4



CM 4

CRN 109-17-1  
CMF C16 H26 O7

PAGE 1-A



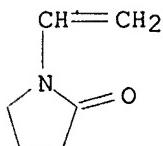
PAGE 1-B

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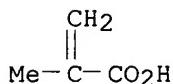
CM 5

CRN 88-12-0

CMF C6 H9 N O



CM 6

CRN 79-41-4  
CMF C4 H6 O2

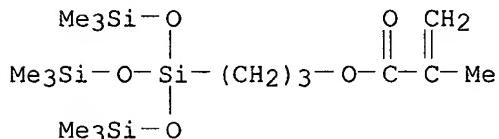
L61 ANSWER 32 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1987:521137 HCPLUS  
 DN 107:121137  
 TI Polymers inhibiting protein binding for use as contact lens  
 IN Falcetta, Joseph J.; Kunzler, Wilhelm F.  
 PA Oculus Contact Lens Co., USA  
 SO U.S., 6 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4645811	A	19870224	US 1984-595580	19840402
AB	The title copolymers are prep'd. from an alkyl acrylate, an organosiloxane ester and a protein binding-inhibiting wetting mixt. of N-(1,1-dimethyl-3-oxobutyl)acrylamide and .gt;eq.1 acids selected from the group consisting of acrylic and methacrylic acid. Acrylic acid (2.0)-N-(1,1-dimethyl-3-oxobutyl)acrylamide(9.6)- ethylens(trimethylsilyl)siloxane(28.4 parts by wt.) copolymer was prep'd. The copolymer was optically homogeneous, showed 0 permeability, was dimensionally stable, had an index of refraction of nD 1.5, had a light transmission of 98%, had a hardness of .apprx.D/96, had a wetting angle of .apprx.20.degree., and a proteinaceous material binding rate of .apprx.0.8%.				
IC	ICM C08F030-08				
NCL	526279000				
CC	63-7 (Pharmaceuticals)				
ST	contact lens acrylate organosiloxane protein binding; siloxane acrylate contact lens protein binding; acrylamide methyloxobutyl protein binding inhibition				
IT	Proteins, biological studies RL: BIOL (Biological study) (binding of, by contact lenses, inhibition of)				
IT	Acrylic polymers, biological studies RL: BIOL (Biological study) (contact lenses contg. organosiloxanes and, protein binding				

inhibition in)  
IT Siloxanes and Silicones, biological studies  
RL: DEV (Device component use); USES (Uses)  
(acrylic, for contact lenses, protein binding-inhibiting  
agent in)  
IT Lenses  
(contact, acrylic copolymers with organosiloxanes as, protein  
binding-inhibiting agent in)  
IT Acrylic polymers, biological studies  
RL: DEV (Device component use); USES (Uses)  
(siloxane-, for contact lenses, protein binding-inhibiting  
agent in)  
IT 91524-13-9P 110226-45-4P  
RL: PREP (Preparation)  
(prepn. of, as contact lens, protein binding inhibition in)  
IT 91524-13-9P 110226-45-4P  
RL: PREP (Preparation)  
(prepn. of, as contact lens, protein binding inhibition in)  
RN 91524-13-9 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with N-(1,1-dimethyl-3-oxobutyl)-2-  
propenamide, 1,2-ethanediyl bis(2-methyl-2-propenoate), methyl  
2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-  
bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

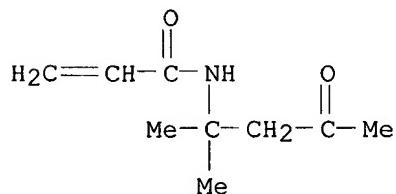
CM 1

CRN 17096-07-0  
CMF C16 H38 O5 Si4



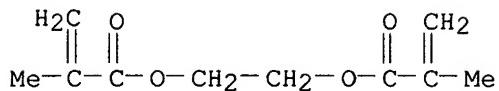
CM 2

CRN 2873-97-4  
CMF C9 H15 N O2



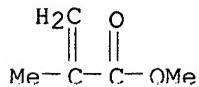
CM 3

CRN 97-90-5  
CMF C10 H14 O4



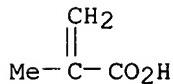
CM 4

CRN 80-62-6  
CMF C5 H8 O2



CM 5

CRN 79-41-4  
CMF C4 H6 O2

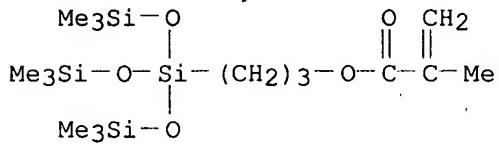


RN 110226-45-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, methyl 2-methyl-2-propenoate, 2-propenoic acid and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

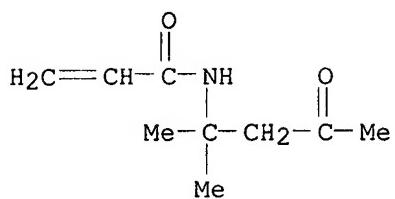
CM 1

CRN 17096-07-0  
CMF C16 H38 O5 Si4



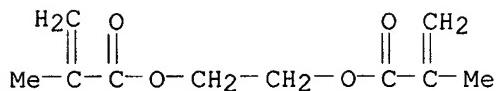
CM 2

CRN 2873-97-4  
CMF C9 H15 N O2



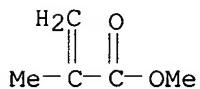
CM 3

CRN 97-90-5  
CMF C10 H14 O4



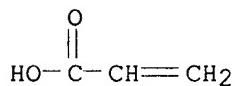
CM 4

CRN 80-62-6  
CMF C5 H8 O2



CM 5

CRN 79-10-7  
CMF C3 H4 O2

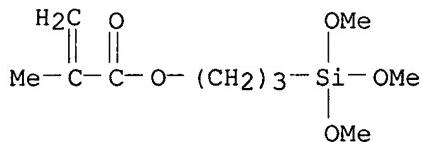


L61 ANSWER 33 OF 37 HCPLUS COPYRIGHT 2002 ACS  
AN 1984:443642 HCPLUS  
DN 101:43642  
TI Acrylic organosilicon polymers for contact lenses or prosthetics  
IN Whitford, Maurice John  
PA Contact Lens (Mfg.) Ltd., UK  
SO PCT Int. Appl., 19 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE  
----- ----- ----- ----- -----

PI WO 8400969 A1 19840315 WO 1983-GB213 19830830  
     W: AU, DK, FI, JP, NO, US  
     RW: AT, BE, CH, DE, FR, LU, NL, SE  
 AU 8319443 A1 19840329 AU 1983-19443 19830830  
 GB 2127422 A1 19840411 GB 1983-23215 19830830  
 GB 2127422 B2 19870225  
 EP 116638 A1 19840829 EP 1983-902999 19830830  
     R: BE, DE, FR, NL, SE  
 DK 8402141 A 19840427 DK 1984-2141 19840427  
 PRAI GB 1982-24630 19820827  
 WO 1983-GB213 19830830  
 AB A dimensionally stable organosilicon polymer contg. hydrolyzable functional groups is prep'd. from copolyrn. of acrylic monomers with vinylsilanes and/or vinylsiloxanes. The polymer has a renewable wettable surface and it useful for making contact lenses or prosthetics. Thus, vinyl methyl siloxane 17.5, Me methacrylate 54, .gamma.-methacryloxypropyltriethoxysilane 22.5, ABN 0.1, and aliyl methacrylate 10 parts were polymd. to give a transparent polymer with a refractive index of 1.45, a water uptake of 0.672% and a wetting angle of 62.degree..  
 IC C08F230-08; A61L017-00; B29D011-00; C08F299-08  
 CC 63-7 (Pharmaceuticals)  
 ST acrylate siloxane contact lens prosthetic  
 IT Acrylic polymers, compounds  
     RL: PREP (Preparation)  
         (reaction products with methacryloxyalkylalkoxysilanes, prepn. of, for contact lenses and prosthetics)  
 IT Siloxanes and Silicones, compounds  
     RL: PREP (Preparation)  
         (Me vinylmethyl, polymers with methacryloxyalkylalkoxysilanes and acrylates, prepn. of, for contact lenses and prosthetics)  
 IT Siloxanes and Silicones, compounds  
     RL: PREP (Preparation)  
         (acrylic, reaction products with methacryloxyalkylalkoxysilanes, prepn. of, for contact lenses and prosthetics)  
 IT Lenses  
     (contact, vinylsiloxane-acrylate polymers for)  
 IT Acrylic polymers, compounds  
     RL: PREP (Preparation)  
         (siloxane-, reaction products with methacryloxyalkylalkoxysilanes, prepn. of, for contact lenses and prosthetics)  
 IT 80-62-6DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 96-05-9DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 97-63-2DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 97-90-5DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 109-16-0DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 142-09-6DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 2530-85-0DP, polymers with acrylates and vinylsiloxanes 2627-95-4DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 21142-29-0DP, polymers with acrylates and vinyl siloxanes 26936-30-1P 81503-75-5P 91034-27-4P  
     RL: PREP (Preparation)  
         (prepn. of, for contact lenses and prosthetics)  
 IT 26936-30-1P 81503-75-5P 91034-27-4P  
     RL: PREP (Preparation)  
         (prepn. of, for contact lenses and prosthetics)  
 RN 26936-30-1 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

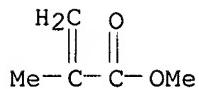
CM 1

CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 2

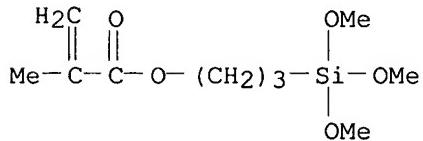
CRN 80-62-6  
CMF C5 H8 O2



RN 81503-75-5 HCPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

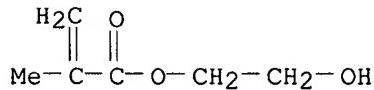
CM 1

CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 2

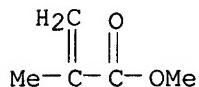
CRN 868-77-9  
CMF C6 H10 O3



CM 3

CRN 80-62-6

CMF C5 H8 O2



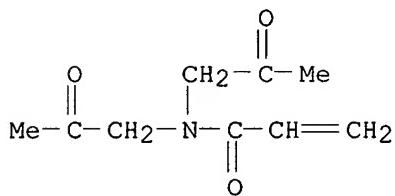
RN 91034-27-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
N,N-bis(2-oxopropyl)-2-propenamide, 2-propenyl 2-methyl-2-propenoate and  
3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 77173-78-5

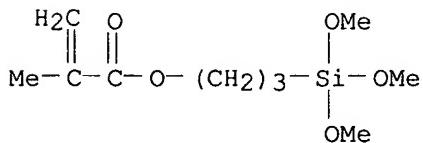
CMF C9 H13 N O3



CM 2

CRN 2530-85-0

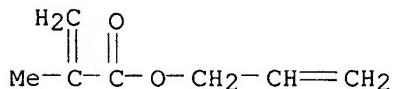
CMF C10 H20 O5 Si



CM 3

CRN 96-05-9

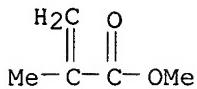
CMF C7 H10 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



L61 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1983:493785 HCAPLUS  
 DN 99:93785  
 TI Silicic acid heteropolycondensate and its use in manufacturing contact lenses  
 IN Schmidt, Helmut; Philipp, Gottfried; Kreiner, Christine F.  
 PA Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V.,  
     Fed. Rep. Ger.; Thilo, Dr., und Co. Contactlinsen G.m.b.H.  
     Menicon-Deutschland-Vertrieb  
 SO Ger. Offen., 21 pp.  
     CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3143820	A1	19830511	DE 1981-3143820	19811104
	EP 78548	A2	19830511	EP 1982-110167	19821104
	EP 78548	A3	19841107		
	EP 78548	B1	19870121		
	R: AT, CH, DE, FR, GB, IT, LI AT 25095	E	19870215	AT 1982-110167	19821104
PRAI	DE 1981-3143820		19811104		
	EP 1982-110167		19821104		
AB	Contact lenses are prep'd. from: 5-20 mol% of MR4, where M is Ti or Zr and R is halogen, hydroxy, alkoxy, acyloxy, or a chelate ligand; 60-95 mol% Rm2(R3Y)nSiX(4-m-n), where R2 is alkyl, alkenyl aryl, arylalkyl, alkylaryl, arylalkenyl, or alkenylaryl, R3 is alkylene, phenylene, alkylphenylene, or alkenylene, and can contain O, S, or NH2 groups, X is H, halogen, hydroxy, alkoxy, acyloxy or NR12 (R1 is H and/or alkyl), Y is a hydrophilic residue, m is 0, 1, or 2, and n is 1, 2, or 3, and m + n is 1-3; 0-30 mol% Rn2SiX4-n; and 0-30 mol% of a low volatility Group Ia-Va or IVb or Vb element, except not Ti or Zr, oxide that is sol. in the reaction medium or a compd. of such element that forms an oxide in the reaction medium. Thus, 22.44 g (3-glycidoxypropyl)trimethoxysilane and 0.98 g Ti(OEt)4 [3087-36-3] were refluxed in 15 mL anhyd. EtOH, refluxed with periodic addns. of anhyd. in HCl in MeOH for 90 min, evapd. at 70.degree., and the residue was mixed with 7.2 mL H2O. The viscous-solid emulsion was warmed to give a clear soln., which was concd., dried in a polypropylene tube at 130.degree. for 24, removed from the tube, dried further at 130.degree., and cut and polished with diamond dust to give lenses with a refractive index of 1.495.				
IC	C08G077-58; B29D011-00; G02B001-04; G02C007-04				
CC	63-7 (Pharmaceuticals)				
ST	siloxane contact lens; glycidylpropyltrimethoxysilane polymer; titanate silicone polymn				
IT	Siloxanes and Silicones, biological studies RL: PREP (Preparation) (for contact lenses, prepn. of)				
IT	<b>Lenses</b> (contact, silicones polymn. for, with tetraalkyl titanates and zirconates)				
IT	1071-76-7 3087-36-3				

RL: CAT (Catalyst use); USES (Uses)  
 (catalyst, for silicone polymn., for contact lenses)

IT 56325-93-0P **66451-46-5P** 86828-93-5P  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP  
 (Preparation); USES (Uses)  
 (prepn. of, for contact lenses)

IT **66451-46-5P**  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP  
 (Preparation); USES (Uses)  
 (prepn. of, for contact lenses)

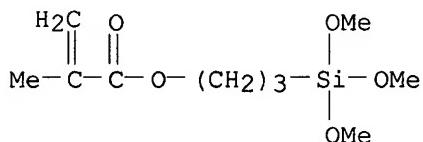
RN 66451-46-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 2530-85-0

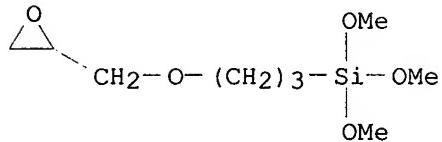
CMF C10 H20 O5 Si



CM 2

CRN 2530-83-8

CMF C9 H20 O5 Si



L61 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1982:205461 HCAPLUS  
 DN 96:205461  
 TI Ionic ophthalmic solutions  
 IN Ellis, Edward J.; Salamone, Joseph C.  
 PA Polymer Technol. Corp., USA  
 SO U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 38,703, abandoned.  
 CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4321261	A	19820323	US 1979-51961	19790625
	US 4436730	A	19840313	US 1981-319111	19811109
PRAI	US 1978-867136		19780105		
	US 1979-38703		19790514		
	US 1979-51961		19790625		

AB A contact lens soln. useful for wetting, soaking and lubricating hard contact lenses, esp. those carrying an ionic charge, contains an ionic polymer (0.001-10% by wt.) of cationic or anionic charge that interacts with an oppositely charged surface of the contact lens forming an interfacial polyelectrolyte complex. This complex forms a hydrogel at the lens surface which absorbs water, has good water retention and is compatible with the physiol. structures of the eye. A durable cushion is formed which provides long lasting comfort to the eye. Thus, a wetting and soaking soln. was prep'd. contg. hydroxyethyl cellulose [9004-62-0] 0.25, JR-400 [53568-66-4] 0.1, benzalkonium chloride 0.005, NaCl 0.75, KCl 0.2 and tri-Na-EDTA 0.1% (by wt.) and distd. water balance to 100. This soln. was used by a no. of patients wearing hard contact lenses prep'd. from 5% methacrylic acid copolymer. All the patients showed a significant improvement in their lens wearing comfort and enhanced ability to wear their lenses for a longer time.

TC A61K031-721

10 1010001  
NCT 424180000

CC 63-7 (Pharmaceuticals)

IT 25135-81-3 50657-50-6 72638-32-5 81853-47-6

RL: BIOL (Biological study)

(contact lenses, wetting of, by formation of interfacial polyelectrolyte complexes with cationic celluloses)

IT 72638-32-5 81853-47-6

RL: BIOL (Biological study)

(contact lenses, wetting of, by formation of interfacial polyelectrolyte complexes with cationic celluloses)

RN 72638-32-5 HCAPLUS

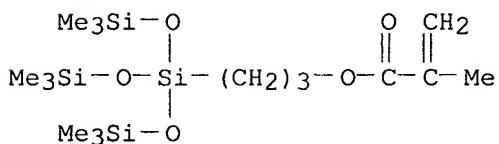
CN 2-Propenoic acid, 2-

oxybis(2,1-ethanediyoxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and  
3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17096-07-0

CMF C16 H38 O5 Si4

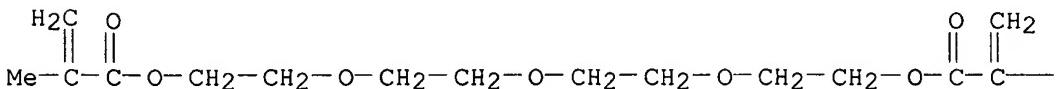


CM 2

CRN 109-17-1

CMF C16 H26 07

PAGE 1-A

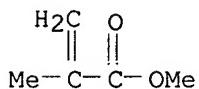


PAGE 1-B

— Me

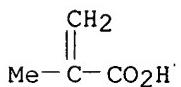
CM 3

CRN 80-62-6  
CMF C5 H8 O2



CM 4

CRN 79-41-4  
CMF C4 H6 O2

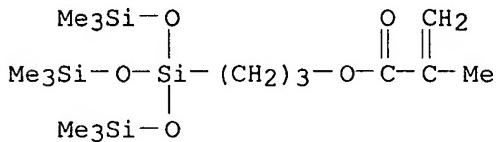


RN 81853-47-6 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with methyl 2-methyl-2-propenoate, oxybis(2,1-ethanediyl)oxy-2,1-ethanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis(trimethylsilyl)oxy]disiloxanylpropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

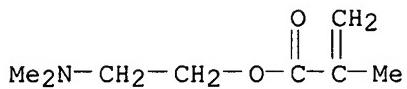
CM 1

CRN 17096-07-0  
CMF C16 H38 O5 Si4



CM 2

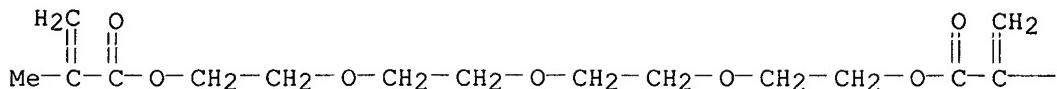
CRN 2867-47-2  
CMF C8 H15 N O2



CM 3

CRN 109-17-1  
CMF C16 H26 O7

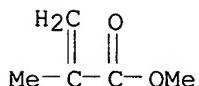
PAGE 1-A



PAGE 1-B

— Me

CM 4

CRN 80-62-6  
CMF C5 H8 O2

L61 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1980:82457 HCAPLUS  
 DN 92:82457  
 TI Hydrophilic contact lens coating  
 IN Ellis, Edward Joseph; Salamone, Joseph Charles  
 PA Polymer Technology Corp., USA  
 SO Brit. UK Pat. Appl., 9 pp.  
 CODEN: BAXXDU  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2012070	A	19790718	GB 1978-49002	19781219
	CA 1152259	A1	19830823	CA 1978-318352	19781221
	DE 2900270	A1	19790719	DE 1979-2900270	19790104
	AU 7943169	A1	19790712	AU 1979-43169	19790105
	AU 527065	B2	19830217		
	FR 2414207	A1	19790803	FR 1979-266	19790105

FR 2414207	B1	19850719		
AU 567665	B2	19871203	AU 1982-90670	19821117
AU 8290670	A1	19830512		
JP 02061017	B4	19901218	JP 1988-37321	19880219
PRAI US 1978-867136		19780105		

AB Hard contact lenses with hydrophilic surface layers of improved compatibility with the physiol. structure of the eye were manufd. by ionizing the polymeric surface of the lens and treating the ionized layer with a polyelectrolyte to form an electrostatically bound layer which absorbed H<sub>2</sub>O to form a hydrogel. E.g., a contact lens was manufd. from methacrylic acid-methacryloyloxypropyltris(trimethylsilyl)siloxane-Me methacrylate-tetraethylene glycol dimethacrylate copolymer [72638-32-5] was steeped 5 min in aq. Na<sub>2</sub>CO<sub>3</sub> (pH 10.7), rinsed in H<sub>2</sub>O, steeped 5 min in 0.1% aq. poly(vinylbenzyltrimethylammonium chloride) [9017-80-5], and washed in H<sub>2</sub>O. The coated lenses gave an advancing contact angle of 78-9.degree. vs. H<sub>2</sub>O whereas untreated lenses gave an angle of 80-82.degree..

IC G02C007-04

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37, 42

IT 25135-81-3 50657-50-6 72638-32-5 72638-33-6

RL: BIOL (Biological study)

(contact lenses, with hydrophilic surface layer)

IT 72638-32-5 72638-33-6

RL: BIOL (Biological study)

(contact lenses, with hy-

638-32-5 HCPLUS

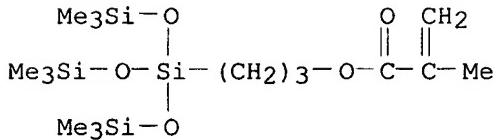
CN 2-Propenoic acid, 2-

oxybis(2,1-ethanediyoxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and  
3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17096-07-0

CMF C16 H38 O5 Si4

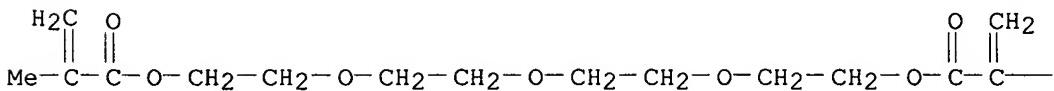


CM 2

CRN 109-17-1

CMF C16 H26 07

PAGE 1-A

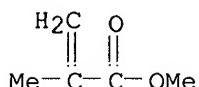


PAGE 1-B

— Me

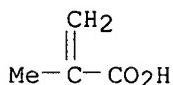
CM 3

CRN 80-62-6  
CMF C5 H8 O2



CM 4

CRN 79-41-4  
CMF C4 H6 O2

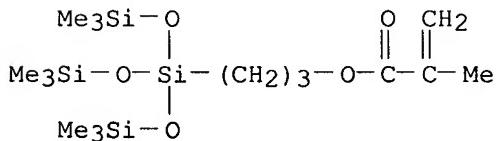


RN 72638-33-6 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with methyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

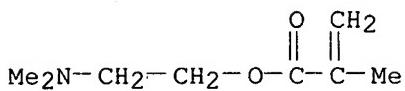
CM 1

CRN 17096-07-0  
CMF C16 H38 O5 Si4

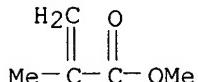


CM 2

CRN 2867-47-2  
CMF C8 H15 N O2



CM 3

CRN 80-62-6  
CMF C5 H8 O2

L61 ANSWER 37 OF 37 HCPLUS COPYRIGHT 2002 ACS  
 AN 1979:444546 HCPLUS  
 DN 91:44546  
 TI Silicone-containing hard contact lens material  
 IN Ellis, Edward J.; Salamone, Joseph C.  
 PA Polymer Technology Corp., USA  
 SO U.S., 6 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4152508	A	19790501	US 1978-878163	19780215
	CA 1102485	A1	19810602	CA 1978-315602	19781031
	DE 2902324	A1	19790823	DE 1979-2902324	19790122
	DE 2902324	C2	19870820		
	FR 2417782	A1	19790914	FR 1979-2244	19790129
	FR 2417782	B1	19850719		
	GB 2014591	A	19790830	GB 1979-3222	19790130
	GB 2014591	B2	19820616		
	AU 7943947	A1	19790823	AU 1979-43947	19790205
	AU 520158	B2	19820114		
	JP 54118455	A2	19790913	JP 1979-16718	19790215
	JP 02019925	B4	19900507		
	JP 02147613	A2	19900606	JP 1989-263771	19891009
	JP 03040060	B4	19910617		
PRAI	US 1978-878163		19780215		

AB Contact lens compns. which have high O permeability, good hardness and ready machinability with good dimensional stability comprise a copolymer of a siloxanyl alkyl ester monomer, an itaconate ester, an acrylate ester and, preferably, a crosslinking agent and hydrophilic monomer. A hard contact lens polymer prep'd. from di-Me itaconate 22.7, Me methacrylate 22.7, methacryloxyoxypropyl tris(trimethylsilyl)siloxane 45.4, methacrylic acid 4.5, tetraethylene glycol dimethacrylate 4.5 with AlBN initiator 0.2 wt.% showed an O permeability of 198 cm<sup>3</sup>/cm<sup>2</sup> s cm Hg .times. 10<sup>10</sup> compared to 1, 22, and 35 for poly(Me methacrylate), polycarbonate; and polystyrene, resp.

IC C08F030-08; C08F230-08; C08F004-04; B29D011-00

NCL 526279000

CC 63-7 (Pharmaceuticals)

IT 70739-71-8P 70739-72-9P 70739-73-0P  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)  
 (prepn. of, for contact lens)

IT 70739-71-8P 70739-72-9P 70739-73-0P  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)  
 (prepn. of, for contact lens)

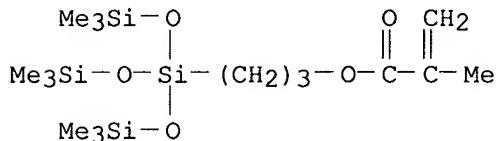
RN 70739-71-8 HCAPLUS

CN Butanedioic acid, methylene-, dimethyl ester, polymer with methyl  
 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediylloxy-  
 2,1-ethanediyl) bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-  
 bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

CM 1

CRN 17096-07-0

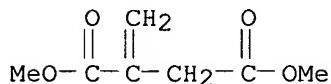
CMF C16 H38 O5 Si4



CM 2

CRN 617-52-7

CMF C7 H10 O4

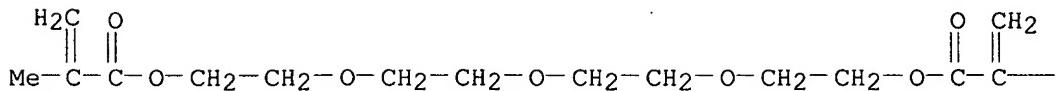


CM 3

CRN 109-17-1

CMF C16 H26 O7

PAGE 1-A

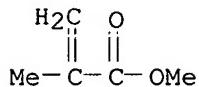


PAGE 1-B

— Me

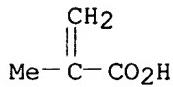
CM 4

CRN 80-62-6  
CMF C5 H8 O2



CM 5

CRN 79-41-4  
CMF C4 H6 O2

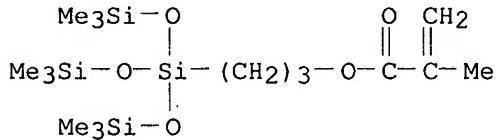


RN 70739-72-9 HCAPLUS

CN Butanedioic acid, methylene-, dimethyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

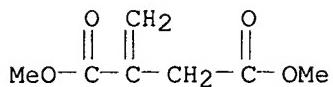
CM 1

CRN 17096-07-0  
CMF C16 H38 O5 Si4



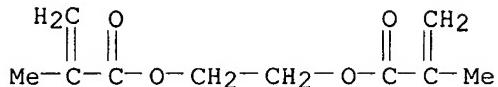
CM 2

CRN 617-52-7  
CMF C7 H10 O4



CM 3

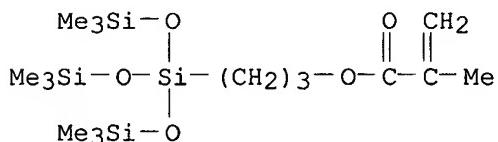
CRN 97-90-5  
CMF C10 H14 O4



RN 70739-73-0 HCAPLUS  
CN Butanedioic acid, methylene-, dimethyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), methyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

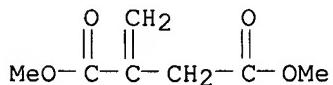
CM 1

CRN 17096-07-0  
CMF C16 H38 O5 Si4



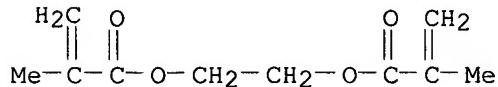
CM 2

CRN 617-52-7  
CMF C7 H10 O4



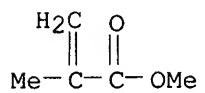
CM 3

CRN 97-90-5  
CMF C10 H14 O4



CM 4

CRN 80-62-6  
CMF C5 H8 O2



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PENG 10/003635

Page 1

*also 10/000136*

=> file reg

FILE 'REGISTRY' ENTERED AT 14:55:46 ON 23 DEC 2002  
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DICTIONARY FILE UPDATES: 22 DEC 2002 HIGHEST RN 477520-59-5

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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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FILE LAST UPDATED: 22 Dec 2002 (20021222/ED)

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=> d que

L7 1 SEA FILE=REGISTRY ABB=ON 7351-61-3  
L8 93 SEA FILE=HCAPLUS ABB=ON L7  
L9 14 SEA FILE=HCAPLUS ABB=ON L8 AND (LENS? OR REFRACT?)  
L10 40 SEA FILE=HCAPLUS ABB=ON L7(L)RCT/RL  
L11 11 SEA FILE=HCAPLUS ABB=ON L9 AND L10

*starting material* *Claim # 5*

=&gt; d l11 bib abs hitind hitstr 1-11

L11 ANSWER 1 OF 11 HCPLUS COPYRIGHT 2002 ACS  
AN 2000:346243 HCPLUS  
DN 133:155352  
TI Low modulus fluorosiloxane-based hydrogels for contact lens application  
AU Kunzler, J.; Ozark, R.  
CS Department of Polymer Development, Bausch and Lomb Inc., Rochester, NY, 14692-0450, USA  
SO ACS Symposium Series (2000), 729(Silicones and Silicone-Modified Materials), 296-307  
CODEN: ACSMC8; ISSN: 0097-6156  
PB American Chemical Society  
DT Journal  
LA English  
AB Novel methacrylate functionalized fluorinated-siloxy silanes were evaluated for potential use in hydrogels for extended wear contact lens application: methacryloyloxypropyl-tris(3-(2,2,3,3,4,4,5,5-octafluoro-pentoxy)propyldimethylsiloxy)silane (Tris(F)), methacryloyloxypropyl-di(3-(2,2,3,3,4,4,5,5-octafluoropentoxy)propyldimethylsiloxy)methylsilane (Di(F)), and 1-(methacryloyloxypropyl)-3-(3-(2,2,3,3,4,4,5,5-octafluoropentoxy)propyl)tetr a-methyldisiloxane (Mono(F)). The methacrylate fluorinated-silanes were synthesized by the hydrosilation reaction of methacrylate capped hydrido-siloxy silanes with allyloxyoctafluoropentane. An alternate synthetic procedure for Mono(F) was developed. Radical bulk polymn. of the methacrylate functionalized fluorinated-siloxy silanes with hydrophilic monomers, such as dimethylacrylamide, resulted in transparent hydrogels possessing a wide range of water contents, high oxygen permeability, and a low modulus of elasticity.  
CC 63-7 (Pharmaceuticals)  
Section cross-reference(s): 35  
ST fluoro siloxane hydrogel contact lens  
IT Contact lenses  
Elasticity  
    (low modulus fluorosiloxane-based hydrogels for contact lens application)  
IT Fluoropolymers, biological studies  
Fluoropolymers, biological studies  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
    (perfluoroalkyl polysiloxane-; low modulus fluorosiloxane-based hydrogels for contact lens application)  
IT Polysiloxanes, biological studies  
Polysiloxanes, biological studies  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
    (perfluoroalkyl; low modulus fluorosiloxane-based hydrogels for contact lens application)  
IT 920-46-7, Methacryloyl chloride 1066-35-9, Dimethylchlorosilane  
3108-07-4 3277-26-7 7351-61-3 18146-00-4,  
Allyloxytrimethylsilane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
    (low modulus fluorosiloxane-based hydrogels for contact lens application)  
IT 17096-08-1P 104104-90-7P 159633-66-6P 192005-21-3P 192005-22-4P  
192005-23-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(low modulus fluorosiloxane-based hydrogels for contact lens application)

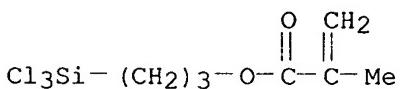
IT 7351-61-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(low modulus fluorosiloxane-based hydrogels for contact lens application)

RN 7351-61-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2002 ACS

AN 1997:571276 HCAPLUS

DN 127:298797

TI Organosiloxane-based acrylic polymer lens materials for eyes and ophthalmic lenses from them

IN Fujitani, Hiroshi; Komura, Ikuo; Nagase, Hiroshi; Aoyagi, Takao; Akimoto, Michiko

PA Kuraray Co., Ltd., Japan; Sagami Chemical Research Center

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
--	------------	------	------	-----------------	------

PI JP 09221530 A2 19970826 JP 1996-54046 19960216

AB The lens materials are obtained by copolymerg. org. monomers contg. .gtoreq. 5 wt.% pyrrolidone ring-contg. organosiloxane monomer components. The above materials are esp. suitable for contact lenses. A copolymer from 3-[1,1-bis[[dimethyl[(1-methyl-2-oxo-3-pyrrolidinyl)methyl]silyl]oxy]-3 ,3-dimethyl-3-[[(1-methyl-2-oxo-3-pyrrolidinyl)methyl]disiloxanyl]propyl-2-propenoic acid Me ester , 2,2,2-trifluoroethyl methacrylate, Me methacrylate, and ethylene glycol dimethacrylate showed high O permeability, contact angle, and good transparency.

IC ICM C08F299-08

ICS A61L027-00; C08F030-08; C08G077-26; G02B001-04; G02C007-04

CC 63-7 (Pharmaceuticals)

ST Section cross-reference(s): 35, 38

IT pyrrolidinylsiloxanylpropenoate methacrylate copolymer contact lens

IT Polysiloxanes, biological studies

RL: DEV (Device component use); PRP (Properties); THU (Therapeutic use);

Biol (Biological study); USES (Uses)

(acrylic; ophthalmic lenses from pyrrolidinylsiloxanylpropenoate-methacrylate copolymers)

IT Contact lenses

Intraocular lenses

(ophthalmic lenses from pyrrolidinylsiloxanylpropenoate-methacrylate copolymers)

IT 195967-21-6P 195967-24-9P 195967-27-2DP, ether with

1-methyl-3-[ (hydroxydimethylsilyl)methyl]-2-pyrrolidone  
 RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (ophthalmic lenses from pyrrolidinylsiloxypropenoate-methacrylate copolymers)

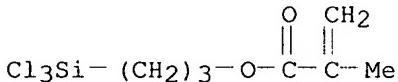
IT 7351-61-3P, 3-Methacryloyloxypropyltrichlorosilane 172413-69-3P  
 172413-70-6P 191356-04-4P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (ophthalmic lenses from pyrrolidinylsiloxypropenoate-methacrylate copolymers)

IT 541-05-9, Hexamethylcyclotrisiloxane 872-50-4, 1-Methyl-2-pyrrolidone, reactions 3144-74-9, Chloromethyldimethylsilane 24636-31-5, 3-Methacryloyloxypropyltrimethylchlorosilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (ophthalmic lenses from pyrrolidinylsiloxypropenoate-methacrylate copolymers)

IT 7351-61-3P, 3-Methacryloyloxypropyltrichlorosilane  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (ophthalmic lenses from pyrrolidinylsiloxypropenoate-methacrylate copolymers)

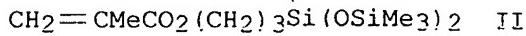
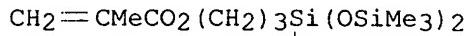
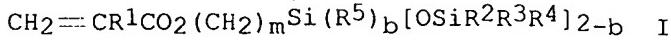
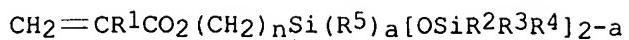
RN 7351-61-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)

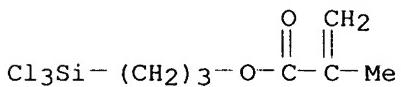


L11 ANSWER 3 OF 11 HCPLUS COPYRIGHT 2002 ACS  
 AN 1996:20130 HCPLUS  
 DN 124:56298  
 TI Preparation of siloxanes as crosslinking agents for methacrylic resin for contact lens  
 IN Ichinohe, Seiji; Yamazaki, Toshio; Suzuki, Nobuyuki  
 PA Shinetsu Chem Ind Co, Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07215984 JP 2880903	A2 B2	19950815 19990412	JP 1994-24727	19940127
OS	CASREACT 124:56298; MARPAT 124:56298				
GI					



- AB The title compds. I [R1 = H, methyl; R2 - R4 = monovalent org. moiety, etc.; R5 = monovalent org. moiety; m, n = 1 - 12; a, b = 0 or 1] are prep'd. from the appropriate silanol derivs. Thus, CH2:CMecO2(CH2)3Si(OH)(OSiMe3)2 (purity 97%) 105 g was added to a mixt. of .gamma.-methacryloyloxypropyltrichlorosilane 78.5 g, tert-butylhydroxytoluene 0.08 g, and triethylamine 95.5 g in toluene 350 g. The resulting mixt. was heated for 2 h at 60.degree.. Me3SiOH 72 g was then added, and the reaction mixt. was heated for 5 h at 60.degree. to give the title compd. II (purity 93%).
- IC ICM C07F007-08
- CC 29-6 (Organometallic and Organometalloidal Compounds)  
Section cross-reference(s): 35, 63
- ST siloxane prep'n crosslinker contact lens resin; silylation silanol
- IT 80722-63-0P 172152-21-5P  
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
(prep'n. of siloxanes as crosslinking agents for methacrylic resin for contact lens)
- IT 75-77-4, Trimethylchlorosilane, reactions 597-52-4, Triethylsilanol 1066-40-6, Trimethylsilanol 7351-61-3, .gamma.-Methacryloyloxypropyltrichlorosilane 83692-44-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prep'n. of siloxanes as crosslinking agents for methacrylic resin for contact lens)
- IT 7351-61-3, .gamma.-Methacryloyloxypropyltrichlorosilane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prep'n. of siloxanes as crosslinking agents for methacrylic resin for contact lens)
- RN 7351-61-3 HCPLUS
- CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1995:246558 HCAPLUS  
 DN 122:11454  
 TI Vinyl- and acryl-functional siloxane monomers having polar fluorinated side chains for manufacture of hydrogels  
 IN Kunzler, Jay; Ozark, Richard  
 PA Bausch and Lomb Inc, USA  
 SO U.S., 9 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5321108	A	19940614	US 1993-17056	19930212
	US 5387662	A	19950207	US 1994-183220	19940118
	WO 9418253	A1	19940818	WO 1994-US1015	19940128
	W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9461670	A1	19940829	AU 1994-61670	19940128
	AU 669058	B2	19960523		
	EP 683799	A1	19951129	EP 1994-908661	19940128
	EP 683799	B1	19971229		
	R: DE, ES, FR, GB, IE, IT				
	BR 9405839	A	19951205	BR 1994-5839	19940128
	CN 1117739	A	19960228	CN 1994-191165	19940128
	JP 08506841	T2	19960723	JP 1994-518112	19940128
	ES 2114181	T3	19980516	ES 1994-908661	19940128
	US 5539016	A	19960723	US 1994-335016	19941107
	CN 1273978	A	20001122	CN 2000-108172	20000429
PRAI	US 1993-17056	A3	19930212		
	US 1994-183220	A3	19940118		
	WO 1994-US1015	W	19940128		
AB	Vinyl- and acryl-functional siloxane monomers having polar fluorinated side chains having a H atom attached to a terminal difluoro-substituted C atom are prep'd. and crosslinked to give hydrogels, useful as contact lenses. The presence of the polar fluorinated side chains improves the solv. of the siloxane monomers in the hydrophilic crosslinkers. Thus, polymn. of octamethylcyclotetrasiloxane with tetramethylcyclotetrasiloxane and bis(4-methacryloyloxybutyl)tetramethylsiloxane in the presence of CF <sub>3</sub> SO <sub>3</sub> H gave a product that was heated 3-4 h at 75.degree. with allyloxyoctafluoropentane in the presence of tetramethyldisiloxane-Pt complex to give product (I) contg. 25 mol% octafluoro side chains. A 70:30 I-N,N-dimethylacrylamide soln. contg. Darocur 1173 was cast to give lenses that were extd. with 2-propanol and buffered saline soln. to give lenses with good wettability.				
IC	ICM C08F018-20				
	ICS C08F030-08; C08F230-08; C08G077-24				
NCL	526242000				
CC	37-3 (Plastics Manufacture and Processing) Section cross-reference(s): 38, 63				
ST	fluorosiloxane unsatd hydrogel manuf; allyloxyoctafluoropentane methacryl terminated hydrosiloxane reaction; methylacrylamide crosslinked acryl fluorosiloxane; contact lens crosslinked unsatd fluorosiloxane; acryl fluorosiloxane hydrogel manuf; vinyl fluorosiloxane hydrogel manuf; macromonomer unsatd fluorosiloxane				
IT	Siloxanes and Silicones, biological studies				

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (acrylic, fluorine-contg., hydrogels for contact lenses)

IT Fluoropolymers  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (acrylic-siloxane-, hydrogels for contact lenses)

IT Lenses  
 (contact, crosslinkers for vinyl- and acryl-functional siloxane monomers having polar fluorinated side chains for manuf. of hydrogels)

IT 7351-61-3, 3-Methacryloyloxypropyltrichlorosilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with trimethylchlorosilane)

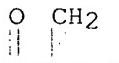
IT 36928-28-6DP, Octamethylcyclotetrasiloxane-tetramethylcyclotetrasiloxane copolymer, methacryloyloxybutyl-terminated, reaction products with allyloxyoctafluoropentane  
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (vinyl compd.-crosslinked; hydrogels for contact lenses)

IT 3108-07-4DP, reaction products with methacryl-terminated siloxanes  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (vinyl compd.-crosslinked; hydrogels for contact lenses)

IT 7351-61-3, 3-Methacryloyloxypropyltrichlorosilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with trimethylchlorosilane)

RN 7351-61-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)

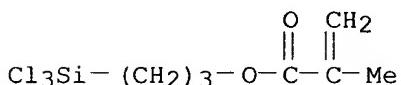


L11 ANSWER 5 OF 11 HCPLUS COPYRIGHT 2002 ACS  
 AN 1987:617837 HCPLUS  
 DN 107:217837  
 TI A process for the preparation of siloxane oligomers as intermediates for polymers used for medical supplies  
 IN Yamamoto, Akira; Takamizawa, Minoru; Ishihara, Toshinobu; Kuroasaki, Tadao  
 PA Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62063596	A2	19870320	JP 1985-204781	19850917
	JP 02055439	B4	19901127		
	US 4727172	A	19880223	US 1986-905576	19860909
PRAI	JP 1985-202131		19850912		
	JP 1985-204781		19850917		
AB	The title compds. R-Si[OSiMe <sub>2</sub> (CH <sub>2</sub> ) <sub>2</sub> CF <sub>3</sub> ] <sub>3</sub> [I; R = H, ClCH <sub>2</sub> , H <sub>2</sub> C:CMCO <sub>2</sub> (CH <sub>2</sub> ) <sub>3</sub> ], useful as intermediates for polymers used for medical supplies such as contact lenses, bandages, etc.(no data), are				

prepd. To a soln. of MeMgCl in 300 mL THF was added dropwise 156 g siloxane trimer [(CF<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>)MeSiO]<sub>3</sub> in 200 mL THF over 2 h and the mixt. was refluxed for 2 h, followed by addn. of 45 g HSiCl<sub>3</sub> at reflux to give 146 g I (R = H).

IC ICM C07F007-18  
 ICA C08F030-08  
 CC 29-6 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 63  
 IT 1558-25-4, Chloromethyltrichlorosilane 7351-61-3 10025-78-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (condensation of, with silyloxy salt)  
 IT 7351-61-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (condensation of, with silyloxy salt)  
 RN 7351-61-3 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 6 OF 11 HCPLUS COPYRIGHT 2002 ACS

AN 1987:428430 HCPLUS

DN 107:28430

TI Contact lenses

IN Kubota, Satoshi; Mogami, Takao

PA Seiko Epson Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

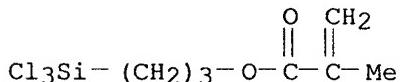
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62038419	A2	19870219	JP 1985-178115	19850813
AB	Contact lenses prepd. from polymers contg. CH <sub>2</sub> :CRCO <sub>2</sub> R <sub>1</sub> (I) units (R = H, Me, F, F <sub>3</sub> C; R <sub>1</sub> = CaH <sub>b</sub> F <sub>2</sub> a-b+1; a = 2-18; b = 0 to 2a-1), [CH <sub>2</sub> CH(OH)CH <sub>2</sub> O] <sub>c</sub> (CH <sub>2</sub> ) <sub>d</sub> (SiR <sub>2</sub> R <sub>3</sub> O)eSiMe <sub>2</sub> CfHgF <sub>2</sub> f-g+1 (II) units [c = 0-1; d = 1-3; R <sub>2</sub> , R <sub>3</sub> = Me, bis(trimethylsiloxy)methylsiloxy; (OSiMe <sub>2</sub> ) <sub>k</sub> CiHjF <sub>2</sub> i-j+1; e,h = 0-3; f = 2-18; g = 0 to 2f-1], or [CH <sub>2</sub> CH(OH)CH <sub>2</sub> O] <sub>k</sub> (CH <sub>2</sub> ) <sub>l</sub> (SiR <sub>4</sub> R <sub>5</sub> O)mSiR <sub>6</sub> R <sub>7</sub> R <sub>8</sub> (III) units [k = 0,1; l = 1-3; R <sub>4</sub> ,R <sub>5</sub> ,R <sub>6</sub> ,R <sub>7</sub> ,R <sub>8</sub> = Me, pentamethyldisiloxanyloxy; bis(trimethylsiloxy)methylsiloxy; m = 0-3] and .gt;req.1 crosslinkable monomer units contg. acrylyl, acrylylamino, (allyloxy)carbonyl, vinyloxycarbonyl, or allyl carbonate groups have high O permeability and good staining resistance. 2,2,2-Trifluoro-1-(trifluoromethyl)ethyl methacrylate 80, 2,2,3,3,4,4-hexafluoro-1,5-pentanediol dimethacrylate 10, 2-hydroxyethyl methacrylate 10, and azobis(2,4-dimethylvaleronitrile) 0.15 part were mixed. The mixt. was then polymd. 6 h at 30.degree., 4 h at 35.degree., 3 h at 40.degree., 2 h at 45.degree., 2 h at 50.degree., 2 h at 60.degree., 2 h at 70.degree., 2 h at 90.degree., and 2 h at 110.degree. to give a polymer, which was cut and abraded to form a contact lens with O transmission 5.2 .times. 10-10 mL-cm/cm <sup>2</sup> -s-mmHg, good staining resistance, and low protein adhesion.				

IC ICM G02C007-04

ICA C08F220-22; C08F220-28; C08F220-54; C08F230-08

CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 37  
 ST staining resistant fluoroacrylate contact lens; soft contact lens fluoroacrylate polymer; hard contact lens fluoroacrylate polymer; oxygen permeability high fluoroacrylate lens; protein adhesion low fluoroacrylate lens; silicon modified fluoroacrylate contact lens  
 IT Lenses  
 (contact, silicon-contg. fluoroacrylate polymers as, staining-resistant, with high oxygen permeability and low protein adhesion)  
 IT Siloxanes and Silicones, biological studies  
 RL: BIOL (Biological study)  
 (polyacrylate-, fluorine-contg., contact lens manuf, from)  
 IT Fluoropolymers  
 RL: BIOL (Biological study)  
 (polyacrylate-siloxane-, contact lens manuf, from)  
 IT 109033-13-8P 109033-16-1P 109033-17-2P 109033-19-4P 109033-20-7P  
 109033-21-8P 109033-22-9P 109033-23-0P 109033-24-1P 109033-25-2P  
 109033-26-3P 109033-87-6P 109055-03-0P 109055-04-1P 112718-99-7P  
 112719-00-3P 112719-01-4P  
 RL: PREP (Preparation)  
 (contact lens, manuf. of, staining-resistant, with high oxygen permeability and low protein adhesion)  
 IT 918-36-5P 104768-70-9P 109053-21-6P  
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and polymn. of, with crosslinkable monomers, for contact lenses)  
 IT 7351-61-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with trimethylsilanol and (tetrahydroperfluoroctadecyl)dimethylsilanol)  
 IT 7351-61-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with trimethylsilanol and (tetrahydroperfluoroctadecyl)dimethylsilanol)  
 RN 7351-61-3 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 7 OF 11 HCPLUS COPYRIGHT 2002 ACS

AN 1986:573972 HCPLUS

DN 105:173972

TI Contact lenses

IN Kubota, Satoshi; Mogami, Takao

PA Seiko Epson K. K., Japan

SO Jpn. Kokai Tokyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

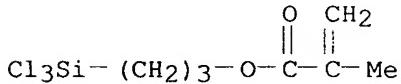
LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 61087102 A2 19860502 JP 1984-197462 19840920  
 AB Contact lenses which low n and good O permeability and compatibility with living tissue, which can be used continuously for a long time, are prep'd. from polymers contg.  $\text{CH}_2=\text{CROCO}_2[\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{O}]_t(\text{CH}_2)_m(\text{SiR}_1\text{R}_2)_n\text{Si}(\text{Me})_2\text{Rf}$  [R = H, Me; R<sub>1</sub>, R<sub>2</sub> = Me, bis(trimethylsiloxy)methylsiloxy, (OSiMe<sub>2</sub>)pMe; Rf = C<sub>2-18</sub> fluoroalkyl; t = 0, 1; m, n, p = 1-3]; hydrophilic monomers; and polyfunctional (meth)acrylates. Thus, heating  $\text{CH}_2=\text{CMeCO}_2\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OCH}_2\text{Si}(\text{OSiMe}_3)_2\text{OSi}(\text{Me})_2\text{CH}_2\text{CH}_2\text{C}_3\text{F}_7$  79, 2-hydroxethyl methacrylate 14, and diethylene glycol dimethacrylate (I) 7 parts with tert-Bu peroxyneodecanoate at 28-105.degree. for 24.5 h gave a transparent copolymer with good machinability. A plasma-treated contact lens had n 1.381 and Shore hardness 58.

IC ICM G02B001-04  
 ICS C08F230-08; G02C007-04  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 63  
 ST oxygen permeability contact lens; methacrylate copolymer contact lens; siloxane methacrylate copolymer lens; fluoroalkyl siloxane methacrylate copolymer  
 IT Lenses  
 (contact, oxygen-permeable, from (fluoroalkyl)siloxanyl acrylate copolymers)  
 IT 104955-28-4 104955-30-8 104955-32-0 104955-34-2 104955-36-4  
 104955-38-6 104986-44-9 104986-46-1  
 RL: USES (Uses)  
 (contact lenses, with good oxygen permeability and low n)  
 IT 7351-61-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with alkylsilanols and fluorosilanols)  
 IT 7351-61-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with alkylsilanols and fluorosilanols)  
 RN 7351-61-3 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 8 OF 11 HCPLUS COPYRIGHT 2002 ACS

AN 1983:476916 HCPLUS

DN 99:76916

TI Hard contact lenses permeable to oxygen

PA Syntex (U.S.A.), Inc., USA

SO Jpn. Kokai Tokyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

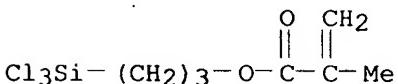
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58007124	A2	19830114	JP 1981-98456	19810626
AB	O-permeable contact lenses are prep'd. by polymg. silicone compds. with acrylates, methacrylates, and/or itaconates. Thus, bis(pentamethyldisiloxanyl)bis(trimethylsiloxy)methylsiloxanyl methacryloxy				

propylsilane (I) [76936-95-3] was prep'd. by treating trichloromethacryloxypropylsilane [7351-61-3] with pentamethyldisiloxanol [56428-93-4] and heptamethylisotrisiloxanol [5272-21-9]. I 45, Me methacrylate 50, methacrylic acid 3, triethylene glycol dimethacrylate 2 parts were mixed with tert-Bu peroxypivalate and held at 48.degreee. for 24 to give a colorless, transparent, hard copolymer [76962-73-7]. The permeability to O<sub>2</sub> was 21.4 .times. 10-11 (cm<sup>2</sup>/s)(O<sub>2</sub> mL/mL .times. mm Hg).

IC G02C007-04; C08F220-10; C08F230-08  
 ICA A61F009-00  
 CC 63-7 (Pharmaceuticals)  
 ST contact lens permeability oxygen; acrylic polymer siloxane contact lens  
 IT Acrylic polymers, biological studies  
     RL: BIOL (Biological study)  
       (silicone-, for hard contact lenses permeable to oxygen)  
 IT Siloxanes and Silicones, biological studies  
     RL: BIOL (Biological study)  
       (acrylic, for hard contact lenses permeable to oxygen)  
 IT Lenses  
     (contact, hard, silicone-acrylic polymers prep'n. for oxygen-permeable)  
 IT 76936-95-3P 76962-71-5P 86589-01-7P  
     RL: PREP (Preparation)  
       (prepn. of, for contact lens polymer manuf.)  
 IT 76962-72-6P 76962-73-7P 76962-76-0P 76962-77-1P 76962-78-2P  
 76962-79-3P 76962-80-6P 76984-65-1P 76984-66-2P 86589-48-2P  
     RL: PREP (Preparation)  
       (prepn. of, for hard contact lenses permeable to oxygen)  
 IT 7351-61-3  
     RL: RCT (Reactant); RACT (Reactant or reagent)  
       (reaction of, with siloxanols)  
 IT 7351-61-3  
     RL: RCT (Reactant); RACT (Reactant or reagent)  
       (reaction of, with siloxanols)  
 RN 7351-61-3 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 9 OF 11 HCPLUS COPYRIGHT 2002 ACS  
 AN 1982:110184 HCPLUS  
 DN 96:110184  
 TI Oxygen-permeable hard and semi-hard contact lens compositions and articles  
 IN Novicky, Nick N.  
 PA Tsuetaki, George F., USA  
 SO U.S., 8 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

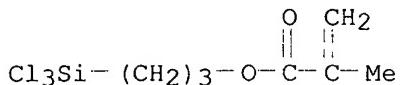
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 4303772	A	19811201	US 1979-72449	19790904

JP 58007418 A2 19830117 JP 1981-98457 19810626  
 WO 8301777 A1 19830526 WO 1981-US1530 19811118  
   W: AT, AU, CH, DE, GB, JP, LU, NL, SE  
   RW: FR  
 AU 8279314 A1 19830601 AU 1982-79314 19811118  
 AU 549045 B2 19860109  
 JP 58501291 T2 19830804 JP 1982-500076 19811118  
 ZA 8108125 A 19821027 ZA 1981-8125 19811123  
 CA 1169187 A1 19840612 CA 1981-391174 19811130  
 PRAI US 1979-72449 19790904  
 WO 1981-US1530 19811118

**AB** Polyalkylsiloxanyl methacryloxyalkylsilanes are copolymerd. with alkyl acrylates or methacrylates to produce highly permeable contact lens materials. These copolymers include crosslinking agents and addnl. hydrophilic monomers. Contact lenses thus obtained are easily machined, polished into hard or semihard contact lenses having excellent dimensional stability and good O permeability and can be worn for a long time without discomfort. Thus, a soln. of trichloromethacryloxypropylsilane [7351-61-3] (82 g) in Et<sub>2</sub>O was treated with nonamethyltetrasiloxanol [80750-81-8] (which was prep'd. by chlorination of nonamethyltetrasiloxane [77606-50-9] and subsequent chloride conversion to OH group) at -50.degree. in the presence of pyridine. Thirty-five parts monomer, tris(nonamethyltetrasiloxanyl)methacryloxypropylsilane [80750-75-0], thus obtained was treated with Me methacrylate 60, methacrylic acid 2, diethylene glycol dimethacrylate 2 parts and tert-butylperoxy pivalate (0.14% of the mixt. by wt.) and polymd. This polymer was hard, colorless, rigid, transparent and O permeable.

**IC** C08F220-26; G02C007-04  
**NCL** 526279000  
**CC** 63-7 (Pharmaceuticals)  
**ST** lens contact siloxane methacryloxyalkylsilane copolymer  
**IT** Siloxanes and Silicones, biological studies  
   RL: DEV (Device component use); USES (Uses)  
     (acrylic, for contact lenses)  
**IT** Lenses  
   (contact, siloxanymethacryloxyalkylsilanes and methacrylate copolymers for)  
**IT** Acrylic polymers, biological studies  
   RL: DEV (Device component use); USES (Uses)  
     (siloxane-, for contact lenses)  
**IT** 80750-79-4  
   RL: DEV (Device component use); USES (Uses)  
     (for contact lenses)  
**IT** 80750-75-0P 80750-76-1P 80750-77-2P 80750-78-3P  
   RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
     (prepn. and polymn. of, with methacrylates, for contact lenses )  
**IT** 80758-02-7P 80758-03-8P 80758-04-9P 80758-05-0P 80758-06-1P  
 80758-07-2P 80758-08-3P 80758-09-4P 80758-10-7P 80758-11-8P  
 80758-12-9P 80758-13-0P 80758-14-1P 80758-15-2P 80758-16-3P  
 80804-61-1P  
   RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
   USES (Uses)  
     (prepn. of, for contact lenses)  
**IT** 7351-61-3  
   RL: RCT (Reactant); RACT (Reactant or reagent)  
     (reaction of, with nonamethyltetrasiloxanol)  
**IT** 7351-61-3  
   RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with nonamethyltetrasiloxanol)  
RN 7351-61-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA  
INDEX NAME)



L11 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2002 ACS  
AN 1981:197576 HCAPLUS  
DN 94:197576  
TI Oxygen-permeable hard and semihard contact lens compositions  
IN Novicky, Nick N.  
PA USA  
SO U.S., 7 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4248989	A	19810203	US 1979-74427	19790911
AB	Acrylic or methacrylic copolymers with silicone substituted acrylic or methacrylic comonomers are prep'd. to provide an O permeable, wettable, dimensionally stable, and hard or semihard material for corneal contact lenses. The monomer, bis(trimethylsiloxanyl)bis(trimethylsiloxy)m ethylsiloxanyl methacryloxypropylsilane (I) [77414-16-5] was synthesized from trichloromethacryloxypropyl silane [7351-61-3], trimethylsilanol [1066-40-6] and .beta.-hydroxyheptamethyltrisiloxane [5272-21-9]. A mixt. of the comonomer I 38, Me methacrylate 1.57, methacrylic acid 3, triethylene glycol dimethacrylate 2 parts, and tert-Bu peroxy pivalate 0.14% by wt. of the entire mixt. was placed in a vacuum over at 48.degree. for 24 h. A hard, colorless, transparent and rigid plastic copolymer was formed. The O permeability was (8 .times. 10 <sup>-m</sup> (cm <sup>2</sup> /s)(mL O <sub>2</sub> /mL .times. mm Hg).				
IC	C08F220-28; G02C007-04				
NCL	526264000				
CC	63-7 (Pharmaceuticals)				
ST	contact lens oxygen permeable; methacrylate siloxanyl contact lens				
IT	Lenses (contact, acrylic siloxanes for)				
IT	Siloxanes and Silicones, biological studies (methacryloyloxypropyl, for contact lenses, prep'n of)				
IT	77414-16-5P 77414-17-6P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prep'n and reaction of, with methacrylates, for contact lenses )				
IT	77451-02-6P 77451-03-7P 77451-04-8P 77451-05-9P 77451-06-0P 77451-07-1P 77451-08-2P 77468-28-1P 77468-29-2P RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prep'n of, for contact lenses)				
IT	77414-18-7P RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);				

## USES (Uses)

(prep. of, for contact lenses)

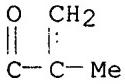
IT 7351-61-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with trimethylsilanol and hydroxyheptamethylsiloxane)

IT 7351-61-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with trimethylsilanol and hydroxyheptamethylsiloxane)

RN 7351-61-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA  
INDEX NAME)

L11 ANSWER 11 OF 11 HCPLUS COPYRIGHT 2002 ACS

AN 1981:145394 HCPLUS

DN 94:145394

TI Oxygen permeable hard and semihard contact lens compositions,  
methods and articles of manufacture

IN Novicky, Nick N.

PA USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4242483	A	19801230	US 1979-66054	19790813
	EP 67254	A1	19821222	EP 1981-302597	19810611
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	EP 67909	A1	19821229	EP 1981-302598	19810611
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	ZA 8104023	A	19830126	ZA 1981-4023	19810615
	ZA 8104024	A	19830126	ZA 1981-4024	19810615
	CA 1251882	A1	19890328	CA 1986-512768	19860630

PRAI US 1979-66054 19790813

AB The title contact lenses were made from copolymers of polysiloxanyl alkyl acrylates or methacrylates with alkyl acrylates, methacrylates, or itaconates, and a crosslinking agent and hydrophilic monomer. Thus, a concavoconvex lens of 0.10 mm thickness was made from bis[bis(trimethylsiloxy)methylsiloxanyl]pentamethyldisiloxanylmethacryloxypropylsilane-Me methacrylate-cyclohexyl methacrylate-N-vinylpyrrolidone-triethylene glycol dimethacrylate copolymer [76962-72-6]. Preps. of the siloxane monomers were given.

IC C08F220-28

NCL 526263000

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 35

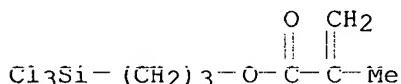
ST polysiloxanyl acrylate contact lens; siloxane acrylate contact lens

IT Lenses

(contact, polysiloxanyl alkyl acrylate copolymers for oxygen permeable)

IT 76962-72-6P 76962-73-7P 76962-74-8P 76962-75-9P 76962-76-0P  
76962-77-1P 76962-78-2P 76962-79-3P 76962-80-6P 76984-65-1P

76984-66-2P  
 RL: PREP (Preparation)  
 (prepn. of, for oxygen permeable contact lenses)  
 IT 7351-61-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with methyldioxanols)  
 IT 7351-61-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with methyldioxanols)  
 RN 7351-61-3 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



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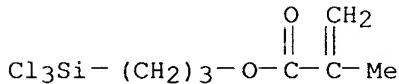
L7 1 SEA FILE=REGISTRY ABB=ON 7351-61-3  
 L8 93 SEA FILE=HCPLUS ABB=ON L7  
 L9 14 SEA FILE=HCPLUS ABB=ON L8 AND (LENS? OR REFRACT?)  
 L10 40 SEA FILE=HCPLUS ABB=ON L7(L)RCT/RL  
 L11 11 SEA FILE=HCPLUS ABB=ON L9 AND L10  
 L12 3 SEA FILE=HCPLUS ABB=ON L9 NOT L11

=> d 112 1-3 bib abs hitind hitstr 1-3

L12 ANSWER 1 OF 3 HCPLUS COPYRIGHT 2002 ACS  
 AN 2000:234059 HCPLUS  
 DN 132:252600  
 TI Antifog optical materials and their manufacture  
 IN Kawase, Akiko; Nakajima, Mikito  
 PA Seiko Epson Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000104046	A2	20000411	JP 1998-276229	19980929
AB	The title optical materials, with good antifog property and scratch resistance, are prep'd. by treating optical materials (e.g., eyeglasses, camera lenses, window glass) having oxides on the surface with silane coupling agents contg. unsatd. double bonds (e.g., .gamma.-glycidoxypolytriethoxysilane, 3-methacryloxypropyltrichlorosilane, 3-methacryloyloxypropyl triethoxysilane), then fixing thiols having hydrophilic groups on branch chains or between hydrophobic groups (e.g., thiomalic acid) by ene-thiol reaction.				
IC	ICM C09K003-18 ICS C03C017-30; G02C011-08				
CC	42-10 (Coatings, Inks, and Related Products) Section cross-reference(s): 73				
ST	eyeglass antifog unsatd silane coupling agent; camera lens antifog unsatd silane coupling agent; window glass antifog unsatd silane				

coupling agent; thiomalic acid antifog optical material  
 IT Antifogging agents  
 Coupling agents  
 Eyeglass lenses  
 Optical materials  
 Windows  
 (antifog optical materials and manuf.)  
 IT Lenses  
 Lenses  
 (camera; antifog optical materials and manuf.)  
 IT Cameras  
 Cameras  
 (lenses; antifog optical materials and manuf.)  
 IT 2602-34-8, .gamma.-Glycidoxypolypropyltriethoxysilane 7351-61-3,  
 3-Methacryloxypropyltrichlorosilane 21142-29-0, 3-Methacryloyloxypropyl  
 triethoxysilane  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (coupling agents; antifog optical materials and manuf.)  
 IT 7351-61-3, 3-Methacryloxypropyltrichlorosilane  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (coupling agents; antifog optical materials and manuf.)  
 RN 7351-61-3 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA  
 INDEX NAME)



L12 ANSWER 2 OF 3 HCPLUS COPYRIGHT 2002 ACS  
 AN 1990:163834 HCPLUS  
 DN 112:163834  
 TI Tintable coatings for glass ophthalmic lenses  
 IN Brown, Jacqueline Leslie; Howe, Stephen Eric; Hultman, Sheryl Lynn  
 PA Corning, Inc., USA  
 SO Eur. Pat. Appl., 6 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 350247	A1	19900110	EP 1989-306747	19890703
	EP 350247	B1	19921014		
	R: DE, ES, FR, GB, IT				
	US 4977029	A	19901211	US 1988-215384	19880705
	CA 1320656	A1	19930727	CA 1989-602099	19890608
	IN 172552	A	19930925	IN 1989-MA498	19890627
	ES 2036345	T3	19930516	ES 1989-306747	19890703
	AU 8937826	A1	19900111	AU 1989-37826	19890704

PRAI US 1988-215384 19880705  
 AB The title coatings, applied to glass lenses in conjunction with  
 an org. dye used in tinting org. plastic lenses, comprise  
 essentially alkyl siloxanes contg. an effective amt. (2-20 vol.%) of a  
 dipolar silane selected from ester-functional, hydroxy-functional,

amino-functional, and carboxylic acid-functional silanes, and their halide forms. The coating imparts <50% visible transmission to the lenses, is optically clear, has excellent resistance to abrasion, and is sufficiently adherent to the glass to withstand boiling water, normal surface abuse, and environmental stresses.

IC ICM C03C017-30

ICS C03C017-34

CC 57-1 (Ceramics)

Section cross-reference(s): 63

ST siloxane dipolar silane coating glass lens; org dye coating  
glass ophthalmic lens

IT Dyes

(org., in dipolar silane-contg. siloxane coatings for tintable glass  
ophthalmic lenses)

IT Coating materials

(siloxanes, contg. dipolar silanes, with org. dye, for tintable glass  
ophthalmic lenses)

IT Lenses

(eyeglass, coatings for tintable, alkylsiloxane-based, dipolar silane  
and org. dye in)

IT 2530-85-0 7351-61-3 7538-44-5 17082-70-1 17945-05-0

18147-81-4 27668-52-6 35141-36-7

RL: USES (Uses)

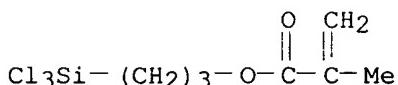
(coatings contg. alkylsiloxanes and, with org. dye, for tintable glass  
ophthalmic lenses)

IT 7351-61-3

RL: USES (Uses)

(coatings contg. alkylsiloxanes and, with org. dye, for tintable glass  
ophthalmic lenses)

RN 7351-61-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA  
INDEX NAME)

L12 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 1989:199249 HCAPLUS

DN 110:199249

TI Oxygen-permeable contact lens materials containing  
methacryloyloxypropanediyl-terminated siloxanes and a method for their  
manufacture

IN Novicky, Nick N.

PA Devou, Maureen J., Can.

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

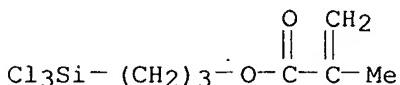
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4743106	A	19880510	US 1986-880668	19860630
	US 4861850	A	19890829	US 1988-153811	19880208
	CA 1300797	A1	19920512	CA 1988-568917	19880608
	BR 8900538	A	19891003	BR 1989-538	19890203
	US 4948855	A	19900814	US 1989-351798	19890515

	US 5093447	A 19920303	US 1990-532660	19900604	
PRAI	US 1986-880668	19860630			
	US 1988-153811	19880208			
	US 1989-351798	19890515			
AB	<p>Highly O-permeable hard and semihard contact lenses consist of polymers consisting of ethylenically unsatd. siloxanylalkoxy ester monomers, ethylenically unsatd. fluorocarbon ester monomers, and/or ethylenically unsatd. sulfone monomers; the contact lenses have an O permeability of .apprx.91 .times. 10-11 (cm<sup>2</sup>/s) (mL O<sub>2</sub>/mL-mmHg) at 35.degree.. The copolymer plastic can be modified by the incorporation of hardening, stability, and/or wettability agents.</p> <p>Trimethylsiloxymethacryloxyethoxysilane 40, cyclohexyl methacrylate 10, Me vinyl sulfone 8, tetrahydrofurfuryl methacrylate 20, 2-hydroxyethyl methacrylate 5, N-vinyl-2-pyrrolidone 7, Me methacrylate 7, and tert-Bu peroxy pivalate 0.4 parts were polymd., producing a copolymer which had Shore D hardness (ASTM-2240) 86.</p>				
IC	ICM G02C007-04				
	ICS C08F230-08				
NCL	351160000R				
CC	63-7 (Pharmaceuticals)				
ST	oxygen permeable hard contact lens siloxane; siloxane methacryloyloxypropanediyl terminated contact lens; contact lens siloxane methacryloyloxypropanediyl terminated				
IT	<p>Lenses</p> <p>(contact, oxygen-permeable, methacryloyloxypropanediyl-terminated siloxanes-contg.)</p>				
IT	Siloxanes and Silicones, biological studies				
	RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				
	(fluoropolymer-polyoxyalkylene-, prepn. of, for oxygen-permeable hard contact lenses)				
IT	Polyoxyalkylenes, biological studies				
	RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				
	(fluoropolymer-siloxane-, prepn. of, for oxygen-permeable hard contact lenses)				
IT	Fluoropolymers				
	RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				
	(polyoxyalkylene-siloxane-, prepn. of, for oxygen-permeable hard contact lenses)				
IT	7351-61-3, Trichloromethacryloxypropylsilane				
	RL: BIOL (Biological study)				
	(condensation of, with tetrahydroperfluorohexanol)				
IT	110301-62-7P				
	RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)				
	(prepn. and polymn. of, in manuf. of oxygen-permeable contact lenses)				
IT	119709-01-2P	119709-02-3P	119709-03-4P	119709-04-5P	119709-05-6P
	119709-07-8P	119709-09-0P	119709-13-6P	119709-15-8P	119709-16-9P
	119709-18-1P	119709-19-2P	119709-20-5P	119709-21-6P	119709-22-7P
	119709-24-9P	119727-78-5P	119727-79-6P	119727-80-9P	119727-81-0P
	119727-82-1P	119727-83-2P	119727-84-3P	119727-85-4P	119760-07-5P
	119760-08-6P	119760-09-7P	119779-61-2P	120472-09-5P	
	RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				
	(prepn. of, for oxygen-permeable hard contact lenses)				
IT	7351-61-3, Trichloromethacryloxypropylsilane				
	RL: BIOL (Biological study)				
	(condensation of, with tetrahydroperfluorohexanol)				

RN 7351-61-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA  
 INDEX NAME)



L12 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:234059 HCAPLUS

DN 132:252600

TI Antifog optical materials and their manufacture

IN Kawase, Akiko; Nakajima, Mikito

PA Seiko Epson Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

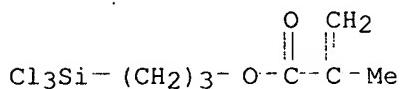
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000104046	A2	20000411	JP 1998-276229	19980929
AB	The title optical materials, with good antifog property and scratch resistance, are prep'd. by treating optical materials (e.g., eyeglasses, camera lenses, window glass) having oxides on the surface with silane coupling agents contg. unsatd. double bonds (e.g., .gamma.-glycidoxypyropyltriethoxysilane, 3-methacryloxypropyltrichlorosilane, 3-methacryloyloxypropyl triethoxysilane), then fixing thiols having hydrophilic groups on branch chains or between hydrophobic groups (e.g., thiomalic acid) by ene-thiol reaction.				
IC	ICM C09K003-18				
CC	ICS C03C017-30; G02C011-08				
ST	42-10 (Coatings, Inks, and Related Products) Section cross-reference(s): 73				
IT	eyeglass antifog unsatd silane coupling agent; camera lens antifog unsatd silane coupling agent; window glass antifog unsatd silane coupling agent; thiomalic acid antifog optical material				
IT	Antifogging agents Coupling agents Eyeglass lenses Optical materials Windows (antifog optical materials and manuf.)				
IT	Lenses Lenses (camera; antifog optical materials and manuf.)				
IT	Cameras Cameras (lenses; antifog optical materials and manuf.)				
IT	2602-34-8, .gamma.-Glycidoxypyropyltriethoxysilane 7351-61-3, 3-Methacryloxypropyltrichlorosilane 21142-29-0, 3-Methacryloyloxypropyl triethoxysilane RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (coupling agents; antifog optical materials and manuf.)				
IT	7351-61-3, 3-Methacryloxypropyltrichlorosilane RL: PRP (Properties); TEM (Technical or engineered material use); USES				

## (Uses)

(coupling agents; antifog optical materials and manuf.)

RN 7351-61-3 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA  
 INDEX NAME)



L12 ANSWER 2 OF 3 HCPLUS COPYRIGHT 2002 ACS

AN 1990:163834 HCPLUS

DN 112:163834

TI Tintable coatings for glass ophthalmic lenses

IN Brown, Jacqueline Leslie; Howe, Stephen Eric; Hultman, Sheryl Lynn

PA Corning, Inc., USA

SO Eur. Pat. Appl., 6 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 350247	A1	19900110	EP 1989-306747	19890703
	EP 350247	B1	19921014		
	R: DE, ES, FR, GB, IT				
	US 4977029	A	19901211	US 1988-215384	19880705
	CA 1320656	A1	19930727	CA 1989-602099	19890608
	IN 172552	A	19930925	IN 1989-MA498	19890627
	ES 2036345	T3	19930516	ES 1989-306747	19890703
	AU 8937826	A1	19900111	AU 1989-37826	19890704

PRAI US 1988-215384 19880705

AB The title coatings, applied to glass lenses in conjunction with an org. dye used in tinting org. plastic lenses, comprise essentially alkyl siloxanes contg. an effective amt. (2-20 vol.%) of a dipolar silane selected from ester-functional, hydroxy-functional, amino-functional, and carboxylic acid-functional silanes, and their halide forms. The coating imparts <50% visible transmission to the lenses, is optically clear, has excellent resistance to abrasion, and is sufficiently adherent to the glass to withstand boiling water, normal surface abuse, and environmental stresses.

IC ICM C03C017-30

ICS C03C017-34

CC 57-1 (Ceramics)

Section cross-reference(s): 63

ST siloxane dipolar silane coating glass lens; org dye coating glass ophthalmic lens

IT Dyes

(org., in dipolar silane-contg. siloxane coatings for tintable glass ophthalmic lenses)

IT Coating materials

(siloxanes, contg. dipolar silanes, with org. dye, for tintable glass ophthalmic lenses)

IT Lenses

(eyeglass, coatings for tintable, alkylsiloxane-based, dipolar silane and org. dye in)

IT 2530-85-0 7351-61-3 7538-44-5 17082-70-1 17945-05-0

18147-81-4 27668-52-6 35141-36-7

RL: USES (Uses)

(coatings contg. alkylsiloxanes and, with org. dye, for tintable glass ophthalmic lenses)

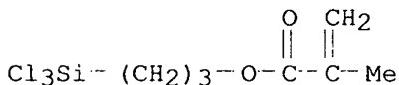
IT 7351-61-3

RL: USES (Uses)

(coatings contg. alkylsiloxanes and, with org. dye, for tintable glass ophthalmic lenses)

RN 7351-61-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L12 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 1989:199249 HCAPLUS

DN 110:199249

TI Oxygen-permeable contact lens materials containing methacryloyloxypropanediyl-terminated siloxanes and a method for their manufacture

IN Novicky, Nick N.

PA Devou, Maureen J., Can.

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4743106	A	19880510	US 1986-880668	19860630
	US 4861850	A	19890829	US 1988-153811	19880208
	CA 1300797	A1	19920512	CA 1988-568917	19880608
	BR 8900538	A	19891003	BR 1989-538	19890203
	US 4948855	A	19900814	US 1989-351798	19890515
	US 5093447	A	19920303	US 1990-532660	19900604
PRAI	US 1986-880668		19860630		
	US 1988-153811		19880208		
	US 1989-351798		19890515		
AB	Highly O-permeable hard and semihard contact lenses consist of polymers consisting of ethylenically unsatd. siloxanylalkoxy ester monomers, ethylenically unsatd. fluorocarbon ester monomers, and/or ethylenically unsatd. sulfone monomers; the contact lenses have an O permeability of .apprx.91 .times. 10-11 (cm <sup>2</sup> /s) (mL O <sub>2</sub> /mL-mmHg) at 35.degree.. The copolymer plastic can be modified by the incorporation of hardening, stability, and/or wettability agents. Trimethylsiloxymethacryloxyethoxysilane 40, cyclohexyl methacrylate 10, Me vinyl sulfone 8, tetrahydrofurfuryl methacrylate 20, 2-hydroxyethyl methacrylate 5, N-vinyl-2-pyrrolidone 7, Me methacrylate 7, and tert-Bu peroxy pivalate 0.4 parts were polyd., producing a copolymer which had Shore D hardness (ASTM-2240) 86.				
IC	ICM G02C007-04				
	ICS C08F230-08				
NCL	35116000R				
CC	63-7 (Pharmaceuticals)				
ST	oxygen permeable hard contact lens siloxane; siloxane				

methacryloyloxypropanediyl terminated contact lens; contact lens siloxane methacryloyloxypropanediyl terminated

IT Lenses  
 (contact, oxygen-permeable, methacryloyloxypropanediyl-terminated siloxanes-contg.)

IT Siloxanes and Silicones, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)  
 (fluoropolymer-polyoxyalkylene-, prepn. of, for oxygen-permeable hard contact lenses)

IT Polyoxyalkylenes, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)  
 (fluoropolymer-siloxane-, prepn. of, for oxygen-permeable hard contact lenses)

IT Fluoropolymers  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)  
 (polyoxyalkylene-siloxane-, prepn. of, for oxygen-permeable hard contact lenses)

IT 7351-61-3, Trichloromethacryloypropylsilane  
 RL: BIOL (Biological study)  
 (condensation of, with tetrahydroperfluorohexanol)

IT 110301-62-7P  
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and polymn. of, in manuf. of oxygen-permeable contact lenses)

IT 119709-01-2P 119709-02-3P 119709-03-4P 119709-04-5P 119709-05-6P  
 119709-07-8P 119709-09-0P 119709-13-6P 119709-15-8P 119709-16-9P  
 119709-18-1P 119709-19-2P 119709-20-5P 119709-21-6P 119709-22-7P  
 119709-24-9P 119727-78-5P 119727-79-6P 119727-80-9P 119727-81-0P  
 119727-82-1P 119727-83-2P 119727-84-3P 119727-85-4P 119760-07-5P  
 119760-08-6P 119760-09-7P 119779-61-2P 120472-09-5P  
 RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)  
 (prepn. of, for oxygen-permeable hard contact lenses)

IT 7351-61-3, Trichloromethacryloypropylsilane  
 RL: BIOL (Biological study)  
 (condensation of, with tetrahydroperfluorohexanol)

RN 7351-61-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)

